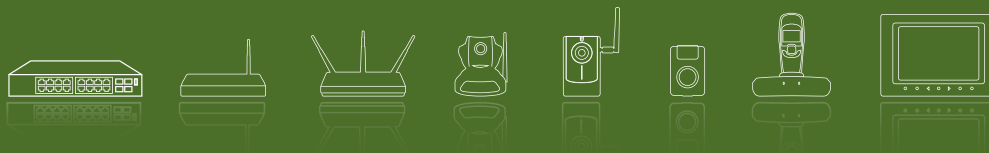


# 2008 Product Guide



## Foreword

D-Link, a global leader in networking business, has been developing networking products for over 21 years to improve the lives of people by providing business, broadband, consumer, and digital home solutions. D-Link has been the market leader in SOHO and SMB networking, holding a lead market share of 24.4% worldwide<sup>1</sup>. The Company has established itself as a worldwide name among networking products and technology, being recognized by BusinessWeek in both their list of "Top 100 Information Technology Companies," and also being ranked ninth for "The Best Returns." Most recently, D-Link has earned 5-star certification from TÜV Rheinland, which recognizes not only D-Link's brand value, but also its social responsibilities as a leading networking company.

## Business Solutions

D-Link delivers a wide range of powerful networking solutions that are designed to create exceptional value for businesses at the enterprise, departmental, and workgroup processing levels. D-Link offers powerful solutions for upgrading to 10-Gigabit Ethernet and 802.11n draft WLAN. Its metro network, multilayer campus, and award-winning xStack switches provide powerful performance, flexible deployment, security, and centralized management suitable for any business environment, while its industry's unique unified wired and wireless switching solutions seamlessly integrate wired and wireless LAN together.

D-Link xStack switches, operating in conjunction with D-Link NetDefend Unified Threat Management (UTM) firewalls, have helped create robust network security for protecting businesses from both internal and external threats. D-Link's network security appliances running the NetDefend security operating system have obtained the highest level of ICSA Labs firewall certification (Firewall 4.1 with Corporate Level), and have now also satisfied the stringent testing criteria of IPSec 1.2 Enhanced Certification.

## Broadband Solutions

D-Link develops and builds the equipment that service providers need to offer reliable high-speed communication. Providing more than just a source of communication for users, broadband service providers today offer users applications such as network storage, integrated voice and video, and IP Surveillance. VoIP is also establishing itself as a cost-effective option for utilizing network convergence, promoting users to voice services on their IP VPN. The new wireless standard IEEE 802.16 WiMAX will play an important role in networking, and D-Link will be shipping a complete line of WiMAX products in 2008.

D-Link's wide range of broadband offerings, including xDSL, PON devices, new generation IAD, IPTV, and VoIP related solutions, allows service providers to customize systems to the specific needs of subscribers in every category to accommodate Internet bandwidth and content. D-Link's in-depth research and development make it possible to provide innovative solutions for today that can assimilate to the future needs of tomorrow's markets.

## Consumer & Digital Home Solutions

D-Link brings the digital home closer to consumers from around the world for productivity and entertainment. It incorporates cutting-edge network technology into next-generation solutions, which includes storage, IP surveillance, multimedia, gaming, VoIP, enhanced high-speed Powerline, and UWB related products. D-Link enables users to connect to a wide range of devices for seamless interoperability that can be accessed anytime, anywhere. The advanced communication products of D-Link can stream data wirelessly throughout the home and remotely control various devices.

The interactive home based on IP solutions is the next step for the evolution of the digital home concept, bringing technology within reach of all consumers. D-Link's progress in products, like storage, digital media players, IP surveillance, gaming and video conferencing for consumers, will enable it to develop automated network solutions that enhance the lives of digital home consumers.

## Environmental Responsibility

D-Link recognizes its responsibility towards its business growth and society, constantly adjusting and innovating technology to meet the needs of both the consumers and the environment. The Company has been actively working to reduce energy consumption, achieving certifications such as Energy Star and RoHS compliance, and developing Green Ethernet products to help protect the Earth. D-Link progressively works to create solutions that benefit both users and the environment, working towards a brighter future.

<sup>1</sup> Source: In-Stat 2007 Q3

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## Features & Benefits

- Stand-Alone, Stackable and Chassis-Based Solutions
- Stand-Alone and Stackable Devices Can Be Managed as Single Unit
- Chassis Solution Can Accommodate Up to 14 Line Cards
- SNMP/Telnet Management
- CLI with RS-232 Console Port
- IGMP Snooping, Up to 256 Multicast Groups
- 802.1Q VLAN, GARP/GVRP
- MAC/IP Filtering, MAC/IP-Based ACL Security
- 802.1d Spanning Tree
- Traffic Prioritization QoS Based on 802.1P, Diffserv, MAC/IP, TCP/UDP
- MAC/IP-Based Rate Limiting
- 802.3ad Link Aggregation
- BRAS, 802.1x, DHCP Server/Relay, PPPoE, MPLS, VLAN-Based VPN, L3 Router, L2TP
- Up to 512 Concurrent VLANs
- Multiple PVC Per Subscriber Line

The IP DSLAM (DSL Access Multiplexer) are carrier-class, high performance devices deployed at the service provider CO (central office) side. They provide IP-based broadband access services to ADSL subscribers CPE (consumer premise equipment) in the multi-unit, multi-tenant buildings over the existed telephone line.

The IP DSLAM connect to the service provider's passive optical network (PON) through their fiber interface. They cost-effectively deliver high-speed Internet access or voice/video service through ADSL and Gigabit Ethernet fiber.

The IP DSLAM extend the broadband service to the end user where the distance from central office may up to 5 km (for ADSL) or 6.1 km (for ADSL2+). Line performance offers rates from 32Kbps to 3 Mbps (upstream), and from 32Kbps to 24Mbps (downstream).

Two categories of IP DSLAM are available for selection. The low-profile rack-mount IP DSLAM have fixed number of ports and are suitable for connection to smaller apartment buildings. They are stackable, allowing ISP to easily add ports to meet their subscriber expansion. The chassis-based IP DSLAM are tailored to meet telecom carriers' requirements for high-speed remote access and subscriber aggregation. They can accommodate a large number of line cards and have high bandwidth flexible backplane designs, combining a variety of technologies to meet various kinds of market requirements.

### DAS-3216

#### 16-Port IP DSLAM



- ADSL2/2+ Standard, Annex A
- 16 ADSL Ports with POTS Splitters
- 2 10/100/1000BASE-T Gigabit Uplinks
- 10/100/1000BASE-T In-band Management Port

### DAS-3248

#### 48-Port IP DSLAM



- ADSL2/2+ Standard, Annex A
- 48 ADSL Ports with POTS Splitters
- 2 10/100/1000BASE-T Gigabit Uplinks
- 10/100/1000BASE-T In-band Management Port

### DAS-3224

#### 24-Port IP DSLAM



- ADSL2/2+ Standard, Annex A
- 24 ADSL Ports with POTS Splitters
- 2 10/100/1000BASE-T Gigabit Uplinks
- 10/100/1000BASE-T In-band Management Port

### DAS-3324

#### 24-Port IP DSLAM



- ADSL2/2+ & Long Reach DSL, Annex A
- 24 ADSL Ports with POTS Splitters
- 2 10/100ASE-FX Ethernet Fiber Ports



## DAS-3324G

### 24-Port IP DSLAM



- ADSL2/2+ & Long Reach DSL, Annex A
- 24 ADSL Ports with POTS Splitters
- 2 10/100/1000BASE-T Gigabit Uplinks

## DAS-3324M

### 24-Port IP DSLAM



- ADSL2/2+ & Long Reach DSL, Annex A
- 24 ADSL Ports with POTS Splitters
- 2 Gigabit Uplinks (10/100/1000BASE-T or 1000BASE-SX/LX)
- Up to 6 Cascaded Units Manageable as Single Unit

## DAS-4192

### 192-Port IP DSLAM



- ADSL2/2+ Annex A, B, M, L
- 6-Slot Chassis with Power, Alarm I/O and Fan Modules
- 4 Open Slots for Line Cards Supporting up to 192 ADSL Ports
- Redundant Power Support
- Dual Star Architecture

## DAS-4192-10

### Network Control Card

- 2 Gigabit Uplinks
- For DAS-4192

## DAS-4192-20

### ADSL2+ Line Card

- 48 ADSL Ports
- For DAS-4192

## DAS-4192-30

### Line Card Dummy Panel

- For DAS-4192

## DAS-4192-40

### POTS Splitter Card

- 48 Splitter Ports
- For DAS-4192

## DAS-4192-50

### POTS Splitter Card Dummy Panel

- For DAS-4192

## DAS-4192-60

### POTS Splitter Chassis

- For DAS-4192

## DAS-4672

### 672-Port IP DSLAM



- ADSL2/2+ Annex A, B, M, L
- 16-Slot Chassis with Power, Alarm I/O and Fan Modules
- 14 Open Slots for Line Cards Supporting up to 672 ADSL Ports
- 2 Slots for Redundant Network Control Cards
- Dual Power Supplies
- Dual Star Architecture

## DAS-4672-10

### ADSL2+ Line Card

- 2 Gigabit Uplinks
- For DAS-4672

## DAS-4672-20

### ADSL2+ Line Card

- 48 ADSL Ports
- For DAS-4672

## DAS-4672-30

### Line Card Dummy Panel

- For DAS-4672

## DAS-4672-40

### POTS Splitter Card

- 48 Splitter Ports
- For DAS-4672

## DAS-4672-50

### POTS Splitter Card Dummy Panel

- For DAS-4672

## Features & Benefits

- **ADSL2+ Speeds up to 24Mbps Downstream, 1Mbps Upstream**

- » High enough for HDTV, streaming multimedia, voice over Internet.
- » High enough for business use.

- **Denial of Service (DoS) Attack Prevention, Stateful Packet Inspection (SPI)**

- » Basic Internet firewall for home and small business use.

- **Parental Control Through Web Site/Domain Name Blocking**

- » Protection against Internet abuse at home and office.

- **Priority Queues Quality of Service**

- » Smooth transfer of voice, music and video images over ADSL line for single user or groups of users.

- **Additional USB Interface**

- » Convenient connection for PC.
- » Can be a bit heavy on computer resources, a little slow in latency terms (such as a high ping time).

The ADSL2+ modems and routers are high-speed Internet connection devices that provide speeds of up to 24Mbps downstream and 1Mbps upstream. These speeds are suitable for high-speed multimedia Internet applications such as streaming video and voice over the Internet.

The standard host interface on the ADSL2+ modems and routers is Ethernet. Combo modems and combo routers have additional USB ports that offer the convenience of extra plug-and-play connection to computers. ADSL2+ modem routers are equipped with built-in ADSL2+ interfaces and are primarily designed for several computers at home or in an office to share Internet access. In addition to ADSL line sharing, they also provide basic firewall functions (SPI and DoS prevention), user access security, and parental control. In addition, they provide Quality of Service (QoS) based on priority queues, application ports or user-defined classification (e.g. TCP/UDP/ICM) to prioritize Internet traffic for smooth running of bandwidth-sensitive applications such as voice and streaming multimedia.

The ADSL2+ wireless modem routers integrate a wireless LAN access point function for Wi-Fi equipped users to wirelessly connect to the Internet. For the office, ADSL2+ VPN routers offer hardware-based data encryption via embedded 3DES accelerators, providing users with secure data transfer over the Internet.

The ADSL2+ VoIP modem routers offer integrated VoIP function for Internet phone connection, while the ADSL2+ ISDN VoIP routers provide additional ISDN interfaces, and the ADSL2+ ISDN PBX add IP PBX trunk connections for office use.

### DSL-320T DSL-380T

#### ADSL2+ Modem



- ADSL2/2+ Standards, Annex A
- 1 ADSL2+ Port
- 1 10/100BASE-TX Ethernet Port

### DSL-322T DSL-382T

#### ADSL2+ Combo Modem



- ADSL2/2+ Standards, Annex A (DSL-322T), Annex B (DSL-382T)
- 1 ADSL2+ Port
- 1 10/100BASE-TX Ethernet Port
- Additional USB Port for Computer Connection

### DSL-2300B/2302B/2304B DSL-320B/321B

#### ADSL2+ Modem



- ADSL2/2+ Standards, Annex A (DSL-2300B, DSL-2302B, DSL-2304B, DSL-320B), Annex B (DSL-321B)
- 10/100BASE-TX Ethernet Connection to Computer or Router

### DSL-2320B/2322B/2324B DSL322B/323B

#### ADSL2+ Combo Modem



- ADSL2/2+ Standards, Annex A (DSL-2320B, DSL-2322B, DSL-2324B, DSL322B), Annex B (DSL-323B)
- 1 ADSL2+ Port
- 1 10/100BASE-TX Ethernet Port
- Additional USB Port for Computer Connection

## DSL-520T DSL-580T

### ADSL2+ Modem Router



- ADSL2/2+ Standards, Annex A (DSL-520T), Annex B (DSL-580T)
- 1 ADSL2+ Port
- 1 10/100BASE-TX Ethernet LAN Port
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-2500B/2500U/2502B DSL-2504B/520B/521B

### ADSL2+ Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2500B, DSL-2500U, DSL-2502B, DSL-2504B, DSL-520B), Annex B (DSL-521B)
- 1 ADSL2+ Port
- 1 10/100BASE-TX Ethernet LAN Port
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-522T DSL-582T

### ADSL2+ Combo Modem Router



- ADSL2/2+ Standards, Annex A (DSL-522T), Annex B (DSL-582T)
- 1 ADSL2+ Port
- 1 10/100BASE-TX Ethernet LAN Port
- Additional USB Port for Computer Connection
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-2520B/2520U/2522B DSL-2524B/526B/527B

### ADSL2+ Combo Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2520B, DSL-2520U, DSL-2522B, DSL-2524B, DSL-526B), Annex B (DSL-527B)
- 1 ADSL2+ Port
- 1 10/100BASE-TX Ethernet LAN Port
- Additional USB Port for Computer Connection
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-2540T DSL-2541T

### ADSL2+ 4-Port Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2540T), Annex B (DSL-2541T)
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-2540B/2540U/2542B DSL-2543B

### ADSL2+ 4-Port Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2540B, DSL-2540U, DSL-2542B), Annex B (DSL-2543B)
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-2640T DSL-2641T

### ADSL2+ Wireless G Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2640T), Annex B (DSL-2641T)
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- Integrated 802.11g Wireless LAN
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-2640B/2640U/2641B DSL-2640R/2642B/2643B

### ADSL2+ Wireless G Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2640B, DSL-2640U, DSL-2642B, DSL-2640R), Annex B (DSL-2641B, DSL-2643B)
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- Integrated 802.11g Wireless LAN
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-G624M

### ADSL2+ Wireless 108G MIMO Modem Router



- ADSL2/2+ Standards, Annex A
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- Integrated 802.11g Wireless LAN (108Mbps Turbo Speed)
- Smart Antenna Technology
- Up to 8 Times Better Wireless Signal Range
- Port-Based VLAN Security
- SPI, DoS Firewall

## DSL-2740B DSL-2741B

### ADSL2+ RangeBooster N Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2740B), Annex B (DSL-2741B)
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- Integrated 802.11n Draft Wireless LAN
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-2740R DSL-2741R

### ADSL2+ Wireless N Modem Router



- ADSL2/2+ Standards, Annex A (DSL-2740R), Annex B (DSL-2741R)
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- Integrated 802.11n Draft Wireless LAN
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-G804V

### ADSL2+ Wireless G VPN Modem Router



- ADSL2/2+ Standards, Annex A
- 1 ADSL2+ Port
- 4 10/100BASE-TX Ethernet LAN Ports
- Integrated 802.11g Wireless LAN
- 3DES Accelerator for Secure VPN Data Transfer on Internet
- QoS Priority Queues
- SPI, DoS Firewall

## DVA-3060i DVA-3061i

### ADSL2+ VoIP Modem Router



- DSL2/2+ Standards, Annex A (DVA-3060i), Annex B (DVA-3061i)
- 1 ADSL2+ Port
- 1 FXS VoIP Port (SIP Protocol) for Phone/Fax Connection
- FXO PSTN Lifeline Port
- 1 10/100BASE-TX Ethernet LAN Port
- QoS Priority Queues
- SPI, DoS Firewall

## DVA-3340S DVA-3340SB

### ADSL2+ 2-Port VoIP Modem Router



- ADSL2/2+ Standards, Annex A (DVA-3340S), Annex B (DVA-3340SB)
- 1 ADSL2+ Port
- 2 FXS VoIP Ports (SIP Protocol) for Phone/Fax Connections
- FXO PSTN Lifeline Port
- 4 10/100BASE-TX Ethernet LAN Ports
- USB Port for Computer Connection
- QoS Priority Queues
- SPI, DoS Firewall
- Port-Based VLAN Security

## DVA-G3670B/G3671B/G3672B

### ADSL2+ VoIP Wireless G Modem Router



- ADSL2/2+ Standards, Annex A (DVA-G3670B, DVA-G3672B), Annex B (DVA-G3671B)
- 1 ADSL2+ Port
- 2 FXS VoIP Ports (SIP Protocol) for Phone/Fax Connections
- FXO PSTN Lifeline Port
- Integrated 802.11g Wireless LAN
- 4 10/100BASE-TX Ethernet LAN Ports
- USB Port for Printer Sharing
- QoS Priority Queues
- SPI, DoS Firewall
- Port-Based VLAN Security

## DVA-N3690i DVA-N3691i

### ADSL2+ VoIP Wireless N Modem Router



- ADSL2/2+ Standards, Annex A (DVA-N3690i), Annex B (DVA-N3691i)
- 1 ADSL2+ Port
- 2 FXS VoIP Ports (SIP Protocol) for Phone/Fax Connections
- FXO PSTN Lifeline Port
- Integrated Draft 802.11n Wireless LAN
- 4 10/100BASE-TX Ethernet LAN Ports
- USB Port for Printer Sharing
- DECT Cordless Phone Base Module
- QoS Priority Queues
- SPI, DoS Firewall
- Port-Based VLAN Security

## DVA-G3342SB

### ADSL2+ ISDN VoIP Wireless G Modem Router



- ADSL2/2+ Standard, Annex B
- 1 ADSL2+ Port
- 1 ISDN Port
- 2 FXS VoIP Ports (SIP Protocol) for 2 Telephone/Fax Connections
- FXO (PSTN) Lifeline Port
- Integrated 802.11g Wireless LAN
- 4 10/100BASE-TX Ethernet LAN Ports
- USB Port for Computer Connection
- QoS Priority Queues
- SPI Firewall

## DVA-G3342SC

### ADSL2+ ISDN Wireless G VoIP PBX



- ADSL2/2+ Standard, Annex B
- 1 ADSL2+ Port
- 1 ISDN Port Supporting Up to 8 ISDN Phone Connections
- 2 FXS VoIP Ports (SIP Protocol) for 2 Telephone/Fax Connections
- FXO (PSTN) Lifeline Port
- IP PBX TK
- Integrated 802.11g Wireless LAN
- 4 10/100BASE-TX Ethernet LAN Ports
- USB 2.0 Port for Printer Connection
- QoS Priority Queues
- SPI Firewall

## Features & Benefits

- **DOCSIS/EuroDOCSIS 2.0 Standards**

- » Latest cable modem standard.
- » Backward compatible with earlier DOCSIS/EuroDOCSIS 1.0, 1.1 standards equipment.

- **DOCSIS/EuroDOCSIS CableLabs Certified**

- » Compatibility with all DOCSIS compatible cable providers.

- **High-Speed Internet Connection**

- » Maximum downstream speeds: 38Mbps (64QAM)/43Mbps (256QAM)<sup>1</sup>
- » Maximum upstream speeds: 320, 640, 1280, 2560, 5120 kbps (QPSK); 640, 1280, 2560, 5120, 10240 kbps (16QAM)<sup>1</sup>

- **Automatic Finding of Send/Receive Data Channels**

- » More efficient and effective broadband connection.
- » Clears network congestion to boost network speeds.

- **DES Encryption/Decryption**

- » Protection for data traveling on the TV network cable.

- **Built-in MCNS MIBs**

- » For SNMP remote management, allows network management to be carried out across multi-vendor platforms.

- **SNMP v1, v2c, v3 Support**

- » Easy integration with SNMP-based, vendor-independent managed network

- **Static IP/Dynamic (DHCP) IP Assignment**

- » Enables efficient management of IP allocations.

<sup>1</sup> Speeds may vary with Cable Service Operator.

The cable modems connect computers and remote routers to a broadband network, providing a standard-based solution for high-speed Internet access. These devices bridge radio-wave-like signals over the cable TV wiring to a standard Ethernet interface. Powered by TurboDOX bandwidth acceleration software, the cable modems increase download speeds at up to 20 times for home users' enjoyment of popular Internet applications, such as file sharing, audio and video streaming, Internet TV and website uploading.<sup>1</sup>

D-Link cable modems make broadband connection more efficient and effective by clearing network congestion, resulting in a boost in download speeds. Users get more out of their broadband connection with increased bandwidth and enhanced performance. A single downstream 6MHz television channel may support up to 38Mbps of downstream data throughput from the cable head end using 64 QAM modulation, or 43Mbps downstream data using 256QAM modulation technology.

With multiple channels, multiple users support, the cable modems can be used with a wide range of applications, from residential (PCs, Internet gateways) to telecommuter (notebooks, portable computers) and SOHO (routers, VoIP gateways).

<sup>1</sup> Speeds may vary with Cable Service Operator.

### DCM-202

#### Cable Modem



- DOCSIS 2.0 CableLabs Certified
- EuroDOCSIS 2.0 CableLabs Compliant
- 10/100BASE-TX Ethernet Port
- USB Port
- CATV Coaxial Port
- Supports Windows (Ethernet and USB), Mac OS & Unix/Linux (Ethernet Only)

### DCM-232

#### Cable Modem



- DOCSIS/EuroDOCSIS 2.0 CableLabs Certified
- 10/100BASE-TX Ethernet Port
- USB Port
- CATV Coaxial Port
- Supports Windows (Ethernet and USB), Mac OS & Unix/Linux (Ethernet Only)

### DCM-212

#### Cable Modem



- DOCSIS/EuroDOCSIS 2.0 CableLabs Compliant
- 10/100BASE-TX Ethernet Port
- USB Port
- CATV Coaxial Port
- Supports Windows (Ethernet and USB), Mac OS & Unix/Linux (Ethernet Only)

### DCM-312

#### Embedded Media Terminal Adapter



- DOCSIS/EuroDOCSIS 2.0 Compliant
- Packet Cable 1.5 CableLabs Certified
- Euro Packet Cable 1.5 CableLabs Compliant
- CATV Coaxial Port
- 2 FXS VoIP Ports (NCS/SIP Protocol) for 2 Telephone Connections



## Features & Benefits

- **Upgrade to VDSL1 Standard**
  - » VDSL2 outperforms VDSL in speed and phone line distance from central office (CO) switch to consumer premise equipment (CPE) modem or router.
  - » Ideal for voice, video, data, high definition television (HDTV) and interactive gaming over the Internet.
- **High Performance at Longer Distance**
  - » Maximum theoretical speed of 250Mbps at "source".
  - » Speeds of 25Mbps available to most consumers.
  - » Speed of 100Mbps available on short loops (up to 300 m phone line distance).
  - » Speed decreases as phone line distance increases from 1 km.
- **Interoperable With Existing Carrier DSL Equipment**
  - » Easy upgrade to systems already installed over the last decade
- **Up to Symmetric 100Mbps Downstream/50Mbps Upstream at Shortened Loop Lengths**
  - » Allows operators to offer "super triple play" of video, Internet and voice services to compete with services offered by satellite and cable operators.
  - » Ideal for HDTV, VoIP and video conferencing.
  - » Not limited to short loops or MTU (Multi-Tenant Units office buildings)/MDU (Multi-Dwelling Units apartment buildings and condominiums) applications; can also be used for medium range applications.

VDSL2 (Very-High-Bit-Rate Digital Subscriber Line 2) is an ITU-T G.993.2 standard an access technology that exploits the existing infrastructure of telephone copper wires that are present in very home, office building, factory, and public premise. VDSL2 can be deployed from the telephone company and service provider central offices, from fiber-fed cabinets located near the customer premises, or within buildings.

VDSL2 is the newest and most advanced standard of DSL broadband wire line communications. Designed to support the wide deployment of services such as voice, video, data, high definition television (HDTV) and interactive gaming, VDSL2 enables operators and carriers to gradually, flexibly, and cost efficiently upgrade existing DSL infrastructure.

VDSL2 is an enhancement to G.993.1 VDSL that permits the transmission of asymmetric and symmetric (full-duplex) aggregate data rates many times higher on the twisted-pair phone wires using a bandwidth up to 30MHz.

### DSL-6301i

#### *VDSL2 Hostless Modem*



- 6-Band VDSL
- 1 VDSL2 Port
- 1 10/100BASE-TX Ethernet LAN Port

### DSL-6540i

#### *VDSL2 4-Port Router*



- 5-Band DMT-Based Ethernet over VDSL
- 1 VDSL2 Port
- Built-in POTS Splitter
- 4 10/100BASE-TX Ethernet LAN Ports
- NAT, DHCP Server, IP Multicast
- MAC/IP/Port Filtering, DoS/DDoS Firewall

### DSL-5540C

#### *VDSL 4-Port Modem*



- 4-Band DMT-Based Ethernet over VDSL
- 1 VDSL2 Port
- Built-in POTS Splitter
- 1 Analog Phone (POTS) Port
- 4 10/100BASE-TX Ethernet LAN Ports

### DSL-6541i

#### *VDSL2 4-Port Router*



- 6-Band VDSL2
- 1 VDSL2 Port
- 4 10/100BASE-TX Ethernet LAN Ports
- USB Port for Printer Sharing
- NAT, DHCP Server, IP Multicast
- QoS Priority Queues
- SPI, DoS Firewall

## DSL-6640i

### VDSL2 Wireless G Router



- Same as DSL-6540i but with Integrated 802.11g Wireless LAN

## DSL-6741i

### VDSL2 Wireless N Router



- 6-Band VDSL2
- 1 VDSL2 Port
- Integrated Draft 802.11n Wireless LAN
- 4 10/100BASE-TX Ethernet LAN Ports
- 1 USB Printer Port
- NAT, DHCP Server, IP Multicast
- QoS Priority Queues
- SPI, DoS Firewall

## DVA-N6671i

### VDSL2 Wireless N VoIP Router



- 6-Band VDSL2
- 1 VDSL2 Port
- 2 FXS VoIP Ports (SIP Protocol) for Phone/Fax Connections
- FXO PSTN Lifeline Port
- Integrated Draft 802.11n Wireless LAN
- 4 10/100BASE-TX Ethernet LAN Ports
- NAT, DHCP Server, IP Multicast
- QoS Priority Queues
- SPI, DoS Firewall

## DEV-3418

### VDSL 16-Port Switch



- 4-Band DMT-Based Ethernet over VDSL
- 16 VDSL Ports
- 16 POTS Splitters
- 2 Combo 10/100/1000BASE-T/SFP Ports
- 10/100BASE-TX Management Port
- 10/100BASE-TX Alarm Port
- IGMP, Multicast, VLAN, 802.1p QoS, Traffic Segmentation, Spanning Tree
- VLAN/MAC/IP-Based Filter
- MAC/IP-Based ACL
- Link Aggregation

## DEV-3418DC

### VDSL 16-Port Switch

- Same as DEV-3418 but with DC Input Power

## DEV-3426

### VDSL2 24-Port Switch



- 4-Band DMT-Based Ethernet over VDSL2
- 24 VDSL2 Ports
- 24 POTS Splitters
- 2 Combo 10/100/1000BASE-T/SFP Ports
- 10/100BASE-TX Management Port
- 10/100BASE-TX Alarm Port
- Software Functions Same as DEV-3418

## DEV-3426DC

### VDSL2 24-Port Switch

- Same as DEV-3426 but with DC Input Power

## DEV-3710I

### VDSL2 8-Port Switch



- 5-Band DMT-Based Ethernet over VDSL2
- 8 VDSL2 Ports
- 8 POTS Splitters
- 2 Combo 10/100/1000BASE-T/SFP Ports
- 10/100BASE-TX Management Port
- 10/100BASE-TX Alarm Port
- IGMP, Multicast, VLAN, 802.1p QoS, Traffic Segmentation, Spanning Tree
- VLAN/MAC/IP-Based Filter
- MAC/IP-Based ACL
- Link Aggregation

## DEV-3718I

### VDSL2 16-Port Switch



- 5-Band DMT-Based Ethernet over VDSL2
- 16 VDSL2 Ports
- 16 POTS Splitters
- 2 Combo 10/100/1000BASE-T/SFP Ports
- 10/100BASE-TX Management Port
- 10/100BASE-TX Alarm Port
- Software Functions Same as DEV-3710I

## DEV-3726I

### VDSL2 24-Port Switch



- 5-Band DMT-Based Ethernet over VDSL2
- 24 VDSL2 Ports
- 24 POTS Splitters
- 2 Combo 10/100/1000BASE-T/SFP Ports
- 10/100BASE-TX Management Port
- 10/100BASE-TX Alarm Port
- Software Functions Same as DEV-3710I



## Features & Benefits

### • Cost Saving Solution for Service Providers

- » Multiple SFF or SC Gigabit PON ports
- » Multiple Ethernet or combo Gigabit 10/100/1000BASE-T/SFP end-user ports
- » SFF or SC 802.3ah Standard OLT Downlink Ports
- » Each OLT port can support up to 32 ONU
- » Up to 1.25Gbps between OLT and ONU
- » OLT ports can support up to 20km fiber cable lengths

### • Flexible/Secure Configuration/Management

- » Local RS-232 out-of-band CLI
- » Remote in-band SNMP/Telnet support
- » SNMP, MIB interface and D-View network management system support
- » Firmware upgrade via FTP or TFTP

### • Redundancy

- » Chassis solution supports line card, control card, power supply hot swap capability
- » Switch solution supports Dual Configuration

### • Advanced Functions for GE-PON Service Offering

- » OAM remote loopback test
- » 802.1D Bridge function
- » Up to 2000 MAC addresses for each PON interface
- » 802.1Q VLAN security/traffic segmentation
- » QoS with multiple 802.1p-based priority levels
- » TOS to CoS
- » Rate Limiting capability
- » IGMP v2
- » ICMP
- » Dual Configuration support (for GE PON switches)

Gigabit Ethernet Passive Optical Network (GE PON) devices deliver high-speed voice, data and video services to residential and business subscribers. They present a high-speed, Fiber-To-The-Home/Building (FTTH/FTTB) and extremely cost-effective alternative to conventional access equipment, reducing points of failure and simplifying network architecture.

D-Link's PON consists of central office nodes, called an optical line terminal (OLT), user nodes, called optical network units (ONU). Between them are the fibers and splitters. The ONU terminate the PON and provide Ethernet interfaces to the end-users. The OLT provide the interface between the PON and the backbone network. They complete the end-to-end last mile with up to 1Gbps of bandwidth to residential and business customers.

D-Link's PON switches provide Point to Multi-Point connection from the Central Office's (CO) Optical Line Terminal (OLT) with single strand fibers going out to passive optical splitters where signal are multiplied to different lines. Combining the economic benefits of Gigabit Ethernet Optical Network (GE PON) with built-in switching functionalities, these devices provide the platform for bandwidth-intensive, high margin applications including Internet TV, HDTV, voice and gaming

The GE-PON service delivers up to 1Gbps speed over optical fiber wiring. The OLT convert GE-PON different interfaces to trunk interfaces. Each OLT can provide multiple 10/100/1000BASE-T/SFP combo interfaces as trunk interfaces, and supports L2 switch function. Each GE-PON interface can accommodates up to 32 ONU through the optical splitter.

### DPN-301

#### GE PON ONU



- 1 1000BASE-LX PON Port (SC Connector)
- 1 10/100/1000BASE-T Port
- PON Port Supports Up to 10 km Single-Mode Fiber Cable Length

### DPN-301L

#### GE PON ONU



- 1 1000BASE-LX PON Port (SC Connector)
- 1 10/100/1000BASE-T Port
- PON Port Supports Up to 20 km Single-Mode Fiber Cable Length

## DPN-301T

### *GE PON ONU*



- 1 1000BASE-LX PON Port (SC Connector)
- 1 10/100/1000BASE-T Port
- 1 CATV RF Connector
- PON Port Supports Up to 10 km Single-Mode Fiber Cable Length

## DPN-304

### *GE PON ONU*



- 1 1000BASE-LX PON Port (SC Connector)
- 4 10/100BASE-TX Ports
- PON Port Supports Up to 10 km Single-Mode Fiber Cable Length

## DPN-3012-E

### *L2 GE PON OLT Switch*



- 4/8/12 1000BASE-LX PON Ports (SFF SC Connectors)
- 4 Combo 10/100/1000BASE-T/SFP Ports
- PON Port Supports Up to 20 km Single-Mode Fiber Cable Length
- RJ-45 and RS-232 Console Ports

## Feature & Benefits

- **Save Long Distance / International Phone Charges**
  - » Make calls using subscribed Internet broadband line already installed at home or office.
  - » No incurring toll charges from telephone companies.
  - » Pay only small charges for VoIP phone forwarding services.
- **SIP Protocol Support**
  - » Industry's latest Voice over the IP network protocol
  - » Compatible with popular SIP Internet phone services.
- **Combination FXS/FXO Port Support**
  - » Flexible gateway deployment for enterprises and ISP.
- **PSTN Lifeline Phone Port**
  - » Uninterrupted phone/fax communication with or without the Internet.
  - » Relays outgoing phone calls to PSTN automatically in case of a power outage at, or when VoIP service is disconnected
- **Quality of Service (QoS)**
  - » Prioritized transmission for voice packets over the Internet.
  - » Minimized interruption to voice transmission/reception due file transfer, web surfing and other Internet uses.
- **Extensive Call Feature Support**
  - » Generally includes Call Transfer, Call Hold, Call Waiting, Caller ID Display, 3-Way Conference functions.
  - » Allows service providers to offer these functions to their subscribers.
  - » Provided that their telephone sets support these functions, callers can take advantage of the features offered
- **Multi-Language Interactive Voice Response (IVR)**
  - » Configuration of individual phone connection by directly using the phone set.
- **Built-in Routing/Firewall Functions**
  - » Allows users to surf the web while making Internet phone calls.
  - » Sharing of Internet connection among a group of computers.
  - » DoS attack prevention firewall protection for connected computers.

The VoIP phone adapters, routers and gateways allow homes and businesses to take advantage of their DSL/cable modem connection to make inexpensive Internet phone calls. Through broadband connection, these devices allow users to access voice and fax services over the Internet to significantly reduce the cost of international and long distance calls.

The VoIP phone adapters and routers are made for homes and small offices, and typically have one or two phone ports. For large offices, the gateways can have up to 32 phone ports for a large number of users to make simultaneous Internet phone calls. The gateways are categorized into two different types: station gateways and trunk gateways. The station gateways have FXS phone ports that connect to regular phone sets, Ethernet WAN ports that connect to DSL/cable modems and built-in router function/Ethernet LAN ports for convenient computer connection. The trunk gateways are equipped with FXO ports, which can connect to PBX, key telephone systems or PSTN phone lines for analog voice, and Ethernet LAN ports which connect to office LAN (IP networks) for VoIP data. The combo gateways provide both FXS and FXO ports for flexible application.

### DVG-2101S

#### 1-Port VoIP Telephone Adapter



- 1 FXS Port
- 1 Ethernet WAN Port

#### ● Automatic Call Redirect (ACR) Table

- » Lists emergency numbers such as police/ambulance service, and special telephone numbers and redirects to the PSTN line when dialing to these number is made.

#### ● Call Detailed Records

- » Allow users to view call duration, time and date of call and call latency.

### DVG-2101SP

#### 1-Port VoIP Telephone Adapter



- 1 FXS Port
- 1 PSTN Lifeline Port
- 1 Ethernet WAN Port

### DVG-5102SP

#### 2-Port VoIP Telephone Adapter



- 2 FXS Ports
- 1 PSTN Lifeline Port
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- NAT Router with DHCP Server, Parental Control

## DVG-5121SP

### 2-Port VoIP Telephone Adapter



- 2 FXS Ports
- 1 PSTN Lifeline Port
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Built-in Router with Access & Parental Control
- 802.1Q VLAN Tag & Voice VLAN Security

## DVG-5401SP

### 1-Port VoIP Router



- 1 FXS Port
- 1 PSTN Lifeline Port
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router with Access Control, DoS Firewall

## DVG-G5402SP

### VoIP Wireless Router



- 2 FXS Ports
- 1 PSTN Lifeline Port
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Integrated 802.11g Wireless LAN
- Built-in Router with Access Control, DoS Firewall

## DPH-50U

### VoIP USB Telephone Adapter



- USB Connection to PC
- 1 PSTN Port to Regular Phone Set
- 1 PSTN Port to Wall Phone Line
- Receive/Make PSTN & VoIP Phone Calls on Regular Phone Set
- Use Skype & QQ Softphone for PC to PC & PC to Phone Calls
- 3-Way Conference, Call Forwarding & Toll Bypassing <sup>1</sup>
- VoIP Call Forward to Remote PSTN Phone Set/Cell Phone & Vice Versa
- Can Connect to DECT, 2.4GHz, 900MHz Cordless Phones
- Phone Conversation Recording Capability
- Can Auto-Detect & Hold Incoming PSTN & VoIP Calls <sup>1</sup>

## DVG-1102S

### 2-Port VoIP Router



- 2 FXS Ports
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Built-in Router

## DVG-5802S

### Wireless N VoIP Router



- 2 FXS Ports
- 1 Gigabit WAN Port
- 8 Gigabit LAN Ports
- Built-in Router with DoS and SPI Firewall
- Integrated Draft 802.11n Wireless LAN

## DVG-1401SP

### 1-Port VoIP Router



- 1 FXS Port
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router
- PSTN Lifeline Port

## DVG-5402SP

### 2-Port VoIP Router



- 2 FXS Ports
- 1 PSTN Lifeline Port
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router with Access Control, DoS Firewall

## DVG-5004S

### 4-Port VoIP Station Gateway



- 4 FXS Ports
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router & Firewall
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-2032S

### 32-Port VoIP Station Gateway



- 32 FXS Ports in 2 RJ-21 Connectors
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-3016S

### 16-Port VoIP Trunk Gateway



- 16 FXO Ports in 1 RJ-21 Connector
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-5008S

### 8-Port VoIP Station Gateway



- 8 FXS Ports
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router & Firewall
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-6004S

### 4-Port VoIP Trunk Gateway



- 4 FXO Ports
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router & Firewall
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-3032S

### 32-Port VoIP Trunk Gateway



- 32 FXO Ports in 2 RJ-21 Connectors
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-2016S

### 16-Port VoIP Station Gateway



- 16 FXS Ports in 1 RJ-21 Connector
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-6008S

### 8-Port VoIP Trunk Gateway



- 8 FXO Ports
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router & Firewall
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-7022S

### 4-Port VoIP Station/Trunk Gateway



- 2 FXS Ports
- 2 FXO Ports
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router & Firewall
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-7044S

### 8-Port VoIP Station/Trunk Gateway



- 4 FXS Ports
- 4 FXO Ports
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router & Firewall
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-4032S

### 32-Port VoIP Station/Trunk Gateway



- 16 FXS Ports, 16 FXO Ports (in 2 RJ-21 Connectors)
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-7062S

### 8-Port VoIP Station/Trunk Gateway



- 6 FXS Ports
- 2 FXO Ports
- 1 Ethernet WAN Port
- 4 Ethernet LAN Ports
- Built-in Router & Firewall
- Call Detailed Records
- Multi-Language Interactive Voice Response

## DVG-4088S

### 16-Port VoIP Station/Trunk Gateway



- 8 FXS Ports, 8 FXO Ports (in 1 RJ-21 Connector)
- 1 Ethernet WAN Port
- 1 Ethernet LAN Port
- Call Detailed Records
- Multi-Language Interactive Voice Response

<sup>1</sup> Functions' availability depends on phone sets' capabilities and telephone service providers' offering, which may come with or without additional charges.

## Features & Benefits

- **Make Phone Calls Worldwide**
  - » Call virtually anywhere through the Internet.
- **Easy to Use**
  - » Look and feel like ordinary phone sets.
  - » Easy installation and configuration through web-based interface.
- **Superior Sound**
  - » Echo Cancellation, Comfort Noise Generation, Voice Activity Detection and Dynamic Jitter Buffer features for excellent sound quality.
- **Convenient Phone Features**
  - » Numerous useful phone functions supported, including Call Transfer, Forward and Hold, 3-Way Conference, Speed Dial/Phone Book, Caller ID Display and LCD screen.<sup>1</sup>
- **Voice VLAN Support**
  - » Isolates callers' voice communication so it cannot be tapped over the network.
- **802.1P Priority Queues Support**
  - » Streamlines traffic so web browsing and Internet download will not interfere with voice traffic and degrade Internet phone quality.
- **Extra LAN Port**
  - » For connection to PC's Ethernet interface; allows callers to talk on the IP Telephone while browsing web sites, send e-mail, transfer files and do other network tasks.
- **SIP Protocol Support**
  - » Industry's latest Voice over the IP network protocol
  - » Compatible with popular SIP Internet phone services.

<sup>1</sup> Functions' availability depends on phone sets' capabilities and telephone service providers' offering, which may come with or without additional charges.

The IP phones allow Internet subscribers to take advantage of their DSL/cable modem connection to make inexpensive Internet phone calls. By utilizing the IP phones with a VoIP service plan, home and business users have the potential to dramatically reduce local and long distance telephone charges compared to a standard telephone service.

The IP phones combine the industry's latest Voice over the IP network (VoIP) technology with advanced communication features, and are compatible with industry-wise phone service. They give callers the advantages of VoIP, while retaining the same look and feel of the familiar analog telephones.

The IP phones are stand-alone devices and do not require connection to computers to operate. They provide Ethernet ports for direct attachment to DSL/cable modems, or to home or office routers with Internet connection. Once they are connected to the Internet, these IP phones are ready for users to make and receive calls. The IP phones incorporate Quality of Service (QoS) and other VoIP features to ensure that voice received through the Internet is the same as or even surpasses that received on the ordinary phone.

The Wi-Fi phones are IP phones with built-in WLAN interfaces. They provide the freedom of wireless connectivity and the benefits of Voice over IP (VoIP) all in one sleek portable flip-style phone. With a growing number of Wi-Fi hotspots and metropolitan areas deploying low-cost or free high-speed Internet connection, and widespread use of LAN switches supporting 802.11 wireless LAN in enterprise networks, mobile users will have more places to use the Wi-Fi phones. Applications include making Internet phone calls at an Internet cafe, from a car or truck in a parking lot equipped with hot spots, or in an office building while roaming around different floors.

### DPH-140S

#### *IP Telephone*



- Speakerphone with Comprehensive Keypad
- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- Second 10/100BASE-TX Connection to PC
- LCD to Display Caller ID & Address Book
- 10 Memory Speed Dial Keys

### DPH-150S

#### *IP Phone*



- Speakerphone with Comprehensive Keypad
- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- Second 10/100BASE-TX Connection to PC
- LCD to Display Caller ID & Address Book
- 12 Dial (CCITT) Keypad



## DPH-150SE

### *IP Phone*



- Speakerphone with Comprehensive Keypad
- 10/100BASE-TX PoE Ethernet Port to 802.3af PoE Switch
- Second 10/100BASE-TX Connection to PC
- LCD to Display Caller ID & Address Book
- 12 Dial (CCITT) Keypad
- 12 Memory Speed Dial Keys
- 802.3af PoE Support

## DPH-400SEDM

### *Extended Dial Module*



- Key Pad for Speed Dial Numbers, Abbreviated Codes, Programmable Features Assignment
- Attachable to DPH-400S or DPH-400SE IP Phone

## DPH-400S

### *IP Phone*



- Speakerphone with Comprehensive Keypad
- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- LCD to Display Caller ID & Address Book
- Supports 4 SIP Accounts Registration
- Attachable to Optional Extended Dial Module

## DPH-400SE

### *Cordless IP Phone*



- Speakerphone with Comprehensive Keypad
- 10/100BASE-TX PoE Ethernet Port to 802.3af PoE Switch
- LCD to Display Caller ID & Address Book
- Supports 4 SIP Accounts Registration
- Attachable to Optional Extended Dial Module
- 802.3af PoE Support

## Features & Benefits

### • SIP Protocol Support

- » Industry's latest Voice over the IP network protocol
- » Compatible with popular SIP Internet phone services.

### • All Essential Telephony Features Provided

- » Call forwarding, call hold, hold music, find me-follow me, voice mail, IVR/auto-attendant, customizable greetings.
- » Incoming calls are directed by integrated auto-attendant and hunt groups to assist callers to their destinations.
- » Can utilize standard phone lines via an external phone line gateway or Internet Telephony services.

### • Easy Expansion

- » Phone extensions can be located anywhere with Internet access.
- » Can add multiple IP PBX units to increase number of extensions or unite a company that has many locations under a single PBX system.
- » Additional extensions can be easily added via license codes.

### • Convenient Web-Based Management

- » Administrator can assign each extension a profile of telephony features that allows the best match for a user's job function.
- » Individual users can fine-tune their assigned profile via the web to match their daily business schedule.

### • Integrated Conference Bridge

- » No need for expensive external phone conference hardware and service.
- » Users can schedule and invite parties to conferences via web configuration.
- » Conference notifications are sent out by e-mail, which include phone numbers and access codes.

### • MD5 SIP authentication encryption encoder

- » Prevents hackers from breaching the system.

### • Integrated DoS/IDS Firewall

- » Intrusion detection and protection against denial of service attacks.

The IP PBX (Private Branch Exchange) equipment unifies the voice network with data applications, using the office LAN as the platform to connect IP phones to the call manager. These devices offer a cost-effective alternative to the traditional analog PBX, as owners do not have to maintain two separate networks for voice and data. Moving and adding an employee to a phone system is as simple as unplugging a telephone and plugging it to a new location, without the need for costly service calls from legacy PBX vendors.

The IP PBX uses VoIP protocol to establish connections between users, and combine the features of traditional PBX with the networking advantages of IP devices. These devices use the SIP PBX technology to provide a new architecture for business communication, enabling organization-wide management support and extensive features such as multi-party conference calls, Interactive Voice Response (IRV) and voice mail.

## DVX-1000

### IP PBX



- 25 IP Phone Line Extensions
- Supports 25 Simultaneous Inbound/ Outbound Calls
- Supports Multiple Users across Multiple Sites
- External Analog Trunk Gateways can be added for Standard Phone Use
- Can be Cascaded Together through LAN Ports to Provide More Phone Extensions
- Integrated Conference Bridge & Firewall

## Features & Benefits

- Internet Sharing for Home/ SOHO
- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- Multiple 10/100BASE-TX Ethernet Ports for Computer Connection
- MAC/IP Address-Based User Access Control
- SPI Firewall, DoS Attack Prevention
- URL Filtering, Domain Blocking, Scheduling Parental Control

These broadband routers are affordable gateways that connect to DSL or cable modems for sharing of Internet connection among a group of home or office computers. Combining basic Internet gateway functions with firewall protection and user access control, they offer homes and small offices a cost-effective way to install a secure Internet link to the outside world.

### DI-604

#### 4-Port Router



- 1 Ethernet WAN Port, 4 Ethernet LAN Ports
- Built-in Firewall, Parental Control

### DIR-100

#### 4-Port Router



- 1 Ethernet WAN Port, 4 Ethernet LAN Ports
- IGMP, QoS for VoIP Traffic, On-Line Games
- Built-in Firewall, Parental Control

### DI-604UP

#### 4-Port Router with USB Printer Port



- 1 Ethernet WAN Port, 4 Ethernet LAN Ports
- USB Port for Printer Connection
- Printer Sharing Supports Windows, Mac OS, Unix LPR
- Built-in Firewall, Parental Control

### DIR-120

#### 4-Port Router with USB Printer Port



- 1 Ethernet WAN Port, 4 Ethernet LAN Ports
- USB Port for Printer Connection
- Printer Sharing Supports Windows, Mac OS, Unix LPR
- IGMP, QoS for VoIP Traffic, On-Line Games
- Built-in Firewall, Parental Control

### DI-704P

#### 4-Port Router with Parallel Printer Port



- 1 Ethernet WAN Port, 4 Ethernet LAN Ports
- Parallel Printer Port
- Printer Sharing Supports Windows, Mac OS, Linux
- Built-in Firewall, Parental Control

### DI-707P

#### 7-Port Router With Parallel Printer Port



- 1 Ethernet WAN Port, 7 Ethernet LAN Ports
- Parallel Printer Port
- Printer Sharing Supports Windows, Mac OS, Linux
- Built-in Firewall, Parental Control

### DI-LB604

#### 4-Port Load Balancing Router



- 2 Ethernet WAN Port, 4 Ethernet LAN Ports
- Outbound Load Balance by Bytes, Packets & Session
- Auto Backup Connection
- Built-in Firewall, Parental Control
- Email & Syslog Alerts

## Features & Benefits

### • Ideal VPN Implementation for SMB

- » Securely connects remote offices and remote users using DSL/cable modem Internet access rather than expensive dedicated WAN links or long-distance remote dial links.
- » Increases the reach of company network without significantly expanding its infrastructure

### • IPSec-Based VPN

- » Proven remote access technology used by most organizations today.
- » Connections established using VPN client software preinstalled on user desktop, primarily useful on company-managed desktops.

### • Data Tunnels & Encryption

- » High levels of security through IPSec/PPTP/L2TP tunnels, policy-based content filtering (tunnel rule policies) and authentication technologies to protect data from unauthorized access.
- » DES/3DES, SHA-1, DM5 multiple encryption algorithms to safeguard data against thieves during transmission over the Internet.

### • Integrated Routing, QoS, Multicast Functions

- » Delivers latency-sensitive voice/video, terminal services and other traffic types while preserving transport reliability and quality over Internet-based VPN.

### • Built-in Firewall

- » Domain blocking/URL filtering for parental control.
- » SPI firewall and DoS attack prevention.
- » Event log file and email to notify administrator of unusual events.

### • VPNC Certified

- » Site-to-site connection works with any D-Link or third-party VPNC-certified VPN router.
- » Site-to-remote client connection works with D-Link VPN Client software (DS-601/605) or any VPNC-certified client software.

The VPN routers provide IPSec security for Virtual Private Network applications, enabling two Internet-connected remote sites to act as if they were part of a single LAN. Branch offices can deploy these routers to connect to head offices or trusted suppliers. Remote offices can also install these routers to let telecommuters (mobile users working outside of the office or workers sending in e-mail and reports from home) to transfer sensitive information with company networks. Such information can be securely transmitted over the Internet without the fear of being intercepted by thieves.

In a site-to-site connection, two remote routers equipped with IPSec VPN are deployed at each end of the Internet connection. In a telecommuter-to-office connection, the remote user runs a VPN client software program on a PC to connect to the office network installed with a VPN router.

The VPN routers provide VPN IPSec tunnels to remote sites or end-user clients, allowing the remote sites and mobile telecommuters to securely transfer sensitive information with company networks without the fear of being intercepted over the Internet. The routers provide VPN accelerators to perform data encryption/decryption to relieve the loading of the routers' own CPU for execution of other tasks and to enhance the routers' overall performance.

D-Link VPN routers are VPNC-certified, and can connect to any third-party VPNC-certified VPN routers at the remote site. For site-to-remote client connection, D-Link VPN routers work with any VPNC-certified client software. As part of a total solution, D-Link provides VPN Client Software (part number DS-601 and DS-605) for remote users to run on a Windows-based PC.

At affordable prices, D-Link VPN routers can also be deployed at homes, so users working away from home can securely access files and data on their own desktops' hard disks over the Internet from anywhere on the planet.



### DI-804HV

#### 4-Port VPN Router



- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- 4 10/100BASE-TX Ethernet Ports for Computer Connection
- RS-232 COM Port for Backup ISDN/ Analog Modem Connection
- VPNC Certified

### DI-808HV

#### 8-Port VPN Router



- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- 8 10/100BASE-TX Ethernet Ports for Computer Connection
- RS-232 COM Port for Backup ISDN/ Analog Modem Connection
- VPNC Certified

## DIR-130

### 8-Port VPN Router



- Powerful CPU/VPN Accelerator for High VPN Performance
- AES, HMAC-SHA1, HMAC-MD5 Encryption Support
- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- 8 10/100BASE-TX Ethernet Ports for Computer Connection
- VPNC Certified

## DI-824VUP

### Wireless G VPN Router



- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- Built-in 802.11g Wireless LAN
- 4 10/100BASE-TX Ethernet Ports for Computer Connection
- USB/Parallel Printer Ports
- Printer Sharing Supports Windows, Mac OS
- RS-232 COM Port for Backup ISDN/ Analog Modem Connection
- VPNC Certified

## DIR-330

### Wireless G VPN Router



- Powerful CPU/VPN Accelerator for High VPN Performance
- AES, HMAC-SHA1, HMAC-MD5 Encryption Support
- Built-in 802.11g Wireless LAN
- 10/100BASE-TX Ethernet Connection to DSL/Cable Modem
- 4 10/100BASE-TX Ethernet Ports for Computer Connection
- Easy Setup Using Windows Connect Now Via USB Port
- VPNC Certified

## Features & Benefits

- **802.11g Standard**
  - » Most widely used industry standard in WLAN.
- **2.4GHz Frequency Band**
  - » Popular radio frequency band currently available for public use in most countries.
- **Up to 54Mbps Data Transfer Rate**
  - » Decent bandwidth for wireless transfer of Internet surfing, file download, multimedia, voice and video.
- **Compatible with 802.11b Devices**
  - » Seamless integration with earlier standard wireless devices.
  - » Preservation of past investments in earlier standard wireless hardware and applications.
- **64/128-Bit WEP Data Encryption**
  - » Protection of wireless data traveling in the air that are sent by the users.
- **WPA EAP/PSK, WPA2 EAP/PSK with TKIP, AES Support**
  - » Wireless LAN security including data encryption keys and user authentication for network access.
  - » Keeps out intruders located next door, upstairs or downstairs.
  - » Advanced encryption and security schemes for business environments.
- **WPS Certified**
  - » Wi-Fi Protected Setup (WPS) provides easy security setup for wireless clients from an AP or router. The AP and routers provide a WPS click button from a PC screen and a WPS push buttons from the devices themselves to let administrators broadcast settings to clients, eliminating the need for clients to manually key in encryption keys and settings to establish connection to network.
- **Workgroup Bridge (WDS) with AP**
  - » This operation mode allows an AP to act as wireless hub and a bridge at the same time.
- **WISP Client Router**
  - » This operation mode lets wireless Internet service (WISP) subscribers share Internet connection with Ethernet-enabled computers without the need for an extra router.
- **WISP Repeater**
  - » This operation mode lets WISP subscribers share Internet connection with wireless computers without any extra router.

The Wireless G products comply with the 802.11g wireless LAN standard and use the popular 2.4GHz frequency band, which is available for public use in most countries. Wireless G is backward compatible with legacy 802.11b wireless equipment, ensuring compatibility with a wide range of wireless devices.

This cost-effective wireless product line is ideal for home and business users needing an affordable high-speed wireless network. It provides data transfer rates of up to 54Mbps suitable for most home and SOHO applications, complete network access security, privacy protection and data encryption including WEP, WPA and WPA2 personal and enterprise security.

### DWL-G122

#### Wireless G USB Adapter



- USB Cable & Cradle Provided
- Supports Windows, Mac OS, Linux

### DWA-610

#### Wireless G CardBus Adapter



- 32-Bit Bus Interface to PC
- Supports Windows, Linux

### DWA-110

#### Wireless G USB Adapter



- USB Cable & Cradle Provided
- Supports Windows, Mac OS, Linux

### DWL-G510

#### Wireless G PCI Adapter



- For Desktop PC
- Supports Windows, Linux

### DWL-G630

#### Wireless G CardBus Adapter



- 32-Bit Bus Interface to PC
- Supports Windows, Linux

### DWA-510

#### Wireless G PCI Adapter



- For Desktop PC
- Supports Windows, Linux

## DAP-1150

### *Wireless G Access Point*



- Operable in AP, Wireless Client or Repeater
- Wi-Fi Protected Setup (WPS)
- For Indoors Use

## DI-524

### *Wireless G 4-Port Router*



- 4 10/100BASE-TX Ethernet LAN Ports
- QoS Traffic Prioritization
- Parental Control, SPI Firewall

## DI-524UP

### *Wireless G 4-Port Router*



- 4 10/100BASE-TX Ethernet LAN Ports
- USB Port for Printer Sharing Under Windows, Mac OS, Unix LPR
- QoS Traffic Prioritization
- Parental Control, SPI Firewall

## DAP-1160

### *Wireless G Access Point*



- Operable in 7 Modes: Access Point, Wireless Client, WDS, WDS with AP, Wireless Repeater, WISP Client Router or WISP Repeater
- 2 10/100BASE-TX Ethernet Ports for LAN and Computer Connection
- For Indoors Use

## DIR-300 DIR-301

### *Wireless G 4-Port Router*



- 4 10/100BASE-TX Ethernet LAN Ports
- QoS Traffic Prioritization
- Parental Control, SPI Firewall

## DWL-G730AP

### *Wireless G Pocket Router/AP*



- Pocket-Sized, Lightweight, Ideal for Traveling
- Operable in AP, Wireless Router or Wireless Client Mode
- Can Be Powered Directly From PC's USB Port
- Traveling Case & Power Adapter Provided

## DWL-2700AP

### *Wireless G Outdoors Access Point*



- Dual 5dBi Dipole Antennas
- Power over Ethernet (PoE)
- Plenum-Rated Housing
- Operable in AP, WDS or WDS With AP Mode
- Up to 54Mbps Wireless Speed
- 8 SSID, 802.1Q VLAN Security
- AP Grouping for Bandwidth Enhancement
- SNMP Manageable

## DIR-320

### *Wireless G 4-Port Router*



- 4 10/100BASE-TX Ethernet LAN Ports
- USB 2.0 for WCN and Printer Connection
- USB Printer Sharing Supporting Windows, Mac OS, Unix LPR
- QoS Traffic Prioritization
- Parental Control, SPI Firewall



## Features & Benefits

- **VGA and DVI-D Output Support**
  - » Compatible with most projectors and monitors currently in use or sold in the market.
- **Multiple Format Support**
  - » Can handle any format file such as PowerPoint, Excel, and Word sent by presenters to projector or monitor from their PC.
- **Audio Output Jack**
  - » Presenters can connect speakers to projector or monitor to liven up presentations with stereo sound.
- **Integrated Ethernet Port**
  - » Presenters can connect gateway to existing network for Internet access, and integrate content from the web to their presentations.
- **Software Installs Directly From Gateway**
  - » No need to insert CD in laptop to install client software.
  - » Client software installs directly into PC through wireless network, no cable required.
- **Multiple Presenter Support**
  - » Seamless delivery of presentations for multiple users by way of simple Connect/Disconnect button
- **No Need for Wireless Access Point**
  - » Presenter's PC can directly connect wirelessly to gateway.
  - » Groups can conduct presentations at hotels or public places where no network infrastructure is available.

The Wireless G Presentation Gateways allow business users to connect projector screens with confidence and enjoy a new presentation experience. Presenters can connect wirelessly to a projector or monitor to display presentations, applications, and images from several notebooks or desktops without connecting additional bulky wires. With just a few clicks users can begin their presentation in style and impress clients. These gateways reduce the amount of downtime in meetings associated with multiple presenters and let everybody enjoy a productive presentation experience.

### DPG-2100

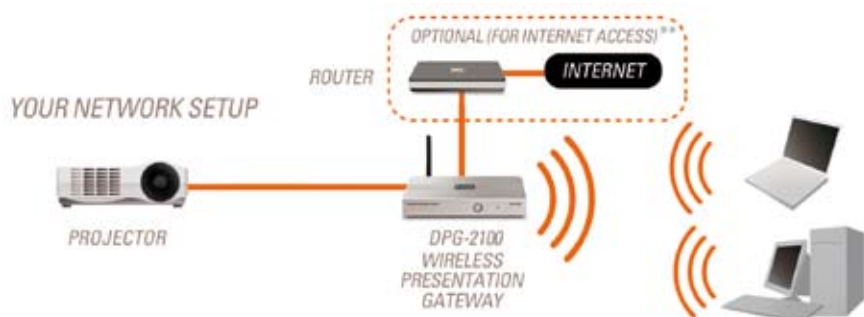
#### Wireless G Presentation Gateway



- Supports VGA, DVI-D Monitor Outputs
- Up to XGA (1024 x 768) Monitor Resolution
- Audio Output
- Integrated 802.11g Wireless LAN
- Multiple Connections From 10 Presenters\*
- Internet Connection Access \*\*
- Compact Size for Easy Placement
- Supports Windows

\* One connection at a time.

\*\* For currently connected user only.



### Features & Benefits

- **Up to 108Mbps Data Transfer Rate**
  - » 108Mbps Turbo mode wireless speed when operating with other 108G and 108AG devices.
  - » High bandwidth for wireless transfer of Internet surfing, file download, multimedia, voice and video.
- **Compatible With 802.11b/g Devices**
  - » Seamless integration with earlier 801.11b standard wireless devices and wireless G devices.
  - » Preservation of past investments in earlier standard wireless hardware and applications.
- **64/128/152-Bit WEP Data Encryption**
  - » Protection of wireless data traveling in the air that are sent by users.
- **WPA EAP/PSK, WPA2 EAP/PSK With TKIP, AES Support**
  - » Wireless LAN security including data encryption keys and user authentication for network access.
  - » Keeps out intruders located next door, upstairs or downstairs.
  - » Advanced encryption and security schemes for business environments.
- **WDS Wireless Bridge**
  - » This operation mode allows an AP to act as a wireless hub and a wireless bridge at the same time.
- **WPS Certified**
  - » Wi-Fi Protected Security (WPS) provides easy security setup for wireless clients from an AP or router. The AP and routers provide a WPS click button from a PC screen and a WPS push buttons from the devices themselves to let administrators broadcast settings to clients, eliminating the need for clients to manually key in encryption keys and settings to establish connection to network.

The Wireless 108G complies with the 802.11g wireless LAN standard but offers data transfer rates of up to 108Mbps in the Turbo mode when operating with other D-Link 108G or 108AG wireless products. Using the 2.4GHz frequency band, Wireless 108G is ideal for home and office users implementing high-bandwidth applications such as Internet phone, audio/video streaming, on-line gaming and large file transfer over the wireless network. With high data transfer rates and compatibility with other 2.4GHz WLAN, Wireless 108G is the ideal upgrade solution to a fast technology that also protects users' past investments in hardware.

#### DWL-G132

##### *Wireless 108G USB Adapter*



- USB Extension Cable & Cradle Provided
- Supports Windows OS

#### DWA-120

##### *Wireless 108G USB Adapter*



- USB Extension Cable & Cradle Provided
- Supports Windows OS

#### DWL-G650

##### *Wireless 108G CardBus Adapter*



- 32-Bit Bus Interface to PC
- Supports Windows, Linux

#### DWA-620

##### *Wireless 108G CardBus Adapter*



- 32-Bit Bus Interface to PC
- Supports Windows, Linux

#### DWL-G680

##### *Wireless 108G CardBus Adapter*



- Dual High Gain Antennas
- Extended Wireless Operation Range
- Supports Windows OS

#### DWL-G520

##### *Wireless 108G PCI Adapter*



- For Desktop PC
- Supports Windows, Linux

### DWA-520

#### Wireless 108G PCI Adapter



- For Desktop PC
- Supports Windows, Linux

### DWL-G550

#### Wireless 108G PCI Adapter



- 5dBi High Gain Antenna
- Extended Wireless Operation Range
- Supports Windows OS

### DWL-2100AP

#### Wireless 108G Access Point



- Operable as Wireless Client, AP (Wireless Connectivity for Computers), WDS (Wireless Bridge), WDS with AP or Repeater (Signal Range Extension)
- AP Grouping (Load Balancing)
- STA Partitioning, 802.1Q VLAN, Multiple SSID
- WMM (Wireless QoS)
- SNMP Manageable
- For Indoors Use

### DWL-2200AP

#### Wireless 108G Access Point



- 802.3af PoE Support
- 5dBi High Gain Antenna
- Operable as AP (Wireless Connectivity for Computers), WDS (Wireless Bridge) or WDS with AP
- Multiple SSID, 802.1Q VLAN Tagging
- SNMP Manageable
- For Indoors Use

### DWL-3200AP

#### Wireless 108G Access Point



- 802.3af PoE Support, Plenum-Rated Housing
- Dual 5dBi Gain Antennas
- Operable in AP, WDS or WDS With AP Mode
- Multiple SSID/VLAN, 802.1Q VLAN Tagging
- Rouge AP Detection, WMM for QoS
- SNMP Management Through D-View
- For Indoors Use

### DWL-3260AP

#### Wireless 108G Access Point



- 802.3af PoE Support
- Smoke Detector Shape, Ceiling Mounting
- Integrated Antenna, Connector for Optional External Antenna
- Operable in AP, WDS or WDS with AP Mode
- Multiple SSID/VLAN, 802.1Q VLAN Tagging
- Rouge AP Detection, AP Grouping (Load Balancing)
- WMM for QoS
- SNMP Management Through D-View

### DAP-3220

#### Wireless 108G Exterior Access Point



- 802.3af PoE Support
- Die-cast, Watertight Housing
- Integrated 9dBi Patch Antenna
- Connector for Optional External Antenna
- Built-in Heater with Temperature Sensor
- Operable in Wireless Client, AP, WDS or WDS with AP Mode
- Multiple SSID/VLAN, 802.1Q VLAN Tagging
- Rouge AP Detection, AP Grouping (Load Balancing)
- WMM for QoS
- Management Through AP Manager II, SNMP D-View

## DI-624

### *Wireless 108G 4-Port Router*



- 4 10/100BASE-TX Ethernet LAN Ports
- QoS Traffic Prioritization
- Parental Control, SPI Firewall

## DIR-400

### *Wireless 108G 4-Port Router*



- 4 10/100BASE-TX Ethernet LAN Ports
- QoS Traffic Prioritization
- Parental Control, SPI Firewall

## DI-624S

### *Wireless 108G Storage Router*



- Allows Creation of Personal Web Server
- Multiple Functions: Files/Storage Sharing, FTP Server, Printer Sharing, UPnP Audio/Video Server
- Firewall: DoS Prevention, SPI, Intrusion Detection, Event Log
- QoS Traffic Prioritization
- 2 USB 2.0 Ports for Hard Disks/Printer Connection
- 4 10/100BASE-TX Ethernet LAN Ports

### Features & Benefits

- **Dual-band Operation**
  - » Simultaneous operation in 802.11b/g 2.4GHz and 802.11a 5GHz frequency bands.
  - » More wireless bandwidth available for use.
  - » Network can be segmented according to frequency band.
- **Up to 108Mbps Data Transfer Rate**
  - » 108Mbps Turbo mode wireless speed when operating with other 108G or 108AG devices.
  - » High bandwidth for wireless transfer of Internet surfing, file download, multimedia, voice and video.
- **64/128/152-Bit WEP Data Encryption**
  - » Protection of wireless data traveling in the air that are sent by users.
- **WPA EAP/PSK, WPA2 EAP/PSK With TKIP, AES Support**
  - » Wireless LAN security including data encryption keys and user authentication for network access.
  - » Keeps out intruders located next door, upstairs or downstairs.
  - » Advanced encryption and security schemes for business environments.
- **WPS Certified**
  - » Wi-Fi Protected Security (WPS) provides easy security setup for wireless clients from an AP or router. The AP and routers provide a WPS click button from a PC screen and a WPS push buttons from the devices themselves to let administrators broadcast settings to clients, eliminating the need for clients to manually key in encryption keys and settings to establish connection to network.

The Wireless 108AG employs both the 5GHz and 2.4GHz frequencies, incorporating 802.11a, 802.11b and 802.11g wireless LAN standards to make it compatible with virtually all existing 802.11 networks. This wireless LAN series provides the most expanded user bandwidth available in a wireless device. It offers data transfer rates of up to 108Mbps in the Turbo Mode in either the 2.4GHz or 5GHz bands when operating with other D-Link Wireless 108AG products, and in the 2.4GHz band when operating with other D-Link Wireless 108G products. Hundreds of wireless clients can connect to this network, using any one of its non-overlapping channels.

Through the user access control function in wireless routers and access points, network administrators can segment users on the wireless network by frequency band. Users who require special networking privilege access to sensitive company data, video conferencing, or connectivity to specific departments may, for example, use the 802.11a channels, while other employees may use the 802.11b and 802.11g channels. This type of user segmentation optimizes the performance of the routers and access points, and delivers the best network experience to each set of users.

#### DWL-AG132

##### Wireless 108AG USB Adapter



- 2.4GHz and 5GHz Dual Band Operation
- USB Connection with USB Extension Cable & Cradle Provided
- Supports Windows OS

#### DWL-AG530

##### Wireless 108AG PCI Adapter



- 2.4GHz and 5GHz Dual Band Wireless Connection for Desktop PC
- Supports Windows, Linux

#### DWL-AG660

##### Wireless 108AG CardBus Adapter



- 2.4GHz and 5GHz Dual Band Wireless Connection for Notebook/Laptop PC
- Supports Windows, Linux

#### DI-784

##### Wireless 108AG 4-Port Router



- 2.4GHz and 5GHz Dual Band Operation
- DoS Prevention, SPI, Intrusion Detection, Event Log
- MAC-Based Access Control
- Domain/URL Filtering Parental Control
- 4 10/100BASE-TX Ethernet LAN Ports

## DWL-7100AP

### *Wireless 108AG Access Point*



- 2.4GHz and 5GHz Dual Band Operation
- Operable in AP, WDS, WDS With AP, or Repeater Mode <sup>2</sup>
- WLAN STA Partitioning
- SNMP Manageable
- Indoors Use

## DWL-8200AP

### *Wireless 108AG Access Point*



- 2.4GHz and 5GHz Dual Band Operation
- Plenum-Rated Housing
- Dual 10/100BASE-TX Ethernet Ports (One Port With 802.3af PoE)
- Dual Ethernet Ports With Separate SSID Can Simultaneously Connect to Wired Network
- Dual 5dBi Gain 5GHz Antennas, 2.5dBi Gain 2.4GHz Antennas
- 802.1Q VLAN
- Operable in AP, WDS or WDS With AP Mode
- SNMP Management Through D-View
- Indoors Use

## DWL-7700AP

### *Wireless AG Outdoors Access Point*



- 2.4GHz and 5GHz Dual Band Operation (Up to 54Mbps)
- Dual 5dBi Dipole Antennas
- 802.3af Power Over Ethernet (PoE) (PoE Base Unit Provided)
- Plenum-Rated Housing
- Operable in AP, WDS or WDS With AP Mode
- Multiple SSID, 802.1Q VLAN, WLAN STA Partitioning
- SNMP Manageable

<sup>1</sup> 108Mbps Turbo mode operation on 5GHz frequency band not allowed in EU countries.

<sup>2</sup> WDS and repeater modes on 5GHz frequency band not allowed in EU countries.

### Features & Benefits

- **Draft 802.11n WLAN Specifications**
  - » Latest high-performance wireless technology.
- **Superior Wireless Speed**
  - » Data transfer rates up to 300Mbps - many times faster than current 802.11g wireless devices.
  - » Suitable for Internet HDTV, streaming video, online games, voice, and MP3 music.
- **Superior Signal Coverage Range**
  - » Wireless operation range many times farther than the current 802.11g devices
  - » Signal reception/transmission at greater distances.
- **Compatible with 802.11b/g and 802.11a/b/g**
  - » Single-band 802.11n draft devices operate in superior speed and range in 2.4GHz frequency band and are backward compatible with 802.11a/b/g devices.
  - » Dual-band 802.11n draft devices operate in superior speed and range in both 2.4GHz and 5GHz frequency ranges while are also backward compatible with existing 802.11a/b/g devices.
  - » Preservation of past investments in earlier standard wireless hardware and applications.
- **Automatic Channel Selection**
  - » The device senses the least used or non-occupied channels within the frequency band and automatically makes them available for wireless clients' connection.
- **User Limit Control**
  - » Administrators can set limit to the number of simultaneous wireless client connections to an AP or router to prevent the network performance from any drastic degradation.
- **64/128-Bit WEP Data Encryption**
  - » Protection of wireless data traveling in the air that are sent by the users.
- **WPA EAP/PSK, WPA2 EAP/PSK with TKIP, AES Support**
  - » Wireless LAN security including data encryption keys and user authentication for network access.
  - » Keeps out intruders located next door, upstairs or downstairs.
  - » Advanced encryption and security schemes for business environments.

Wireless N uses the draft 802.11n specifications and delivers real world performance many times faster than an 802.11g wireless connection. Users can connect a Wireless N router to a cable or DSL modem to create a secure wireless network to share photos, files, music, video, printers, and network storage throughout a home or office. With a built-in intelligent QoS Engine, Wireless N routers provides a better Internet experience by keeping digital phone calls (VoIP), streaming multimedia applications and online gaming smooth and responsive.

#### DWA-130

##### *Wireless N USB Adapter*



- 2 Integrated Antennas to Boost Signal Strength
- Supports Windows

##### ● **WPS Certified**

» Wi-Fi Protected Setup (WPS) provides easy security setup for wireless clients from an AP or router. The AP and routers provide a WPS click button from a PC screen and a WPS push buttons from the devices themselves to let administrators broadcast settings to clients, eliminating the need for clients to manually key in encryption keys and settings to establish connection to network.

#### DAP-2553

##### *Wireless N Switchable Dual Band PoE Access Point*



- User-Selectable 2.4GHz or 5GHz Frequency Band Operation
- Automatic Channel Selection
- Transmit Power Control
- 802.3af PoE Support
- 3 Dipole Antennas to Boost Signal Strength
- Operable as Wireless Client, AP (Wireless Connectivity for Computers), WDS (Wireless Bridge), or WDS with AP
- Multiple SSID, 802.1Q VLAN
- WMM (Wireless QoS)



## DAP-2590

### *Wireless N Switchable Dual Band PoE Access Point*



- User-Selectable 2.4GHz or 5GHz Frequency Band Operation
- Automatic Channel Selection
- Transmit Power Control
- User Limit Control
- 802.3af PoE Support, Plenum-Rated Housing
- 3 Dipole Antennas to Boost Signal Strength
- Operable as Wireless Client, AP (Wireless Connectivity for Computers), WDS (Wireless Bridge), or WDS with AP
- Multiple SSID, 802.1Q VLAN
- WMM (Wireless QoS)

## DIR-605

### *Wireless N Router*



- 1 10/100BASE-TX Ethernet WAN Port
- 4 10/100BASE-TX Ethernet LAN Ports
- MAC/IP-Based Access Control
- Parental Control, SPI Firewall

## DIR-615

### *Wireless N Router*



- 1 10/100BASE-TX Ethernet WAN Port
- 4 10/100BASE-TX Ethernet LAN Ports
- MAC/IP-Based Access Control
- Parental Control, SPI Firewall
- Security Functions Can Be Configured by Users

## DKT-400

### *Wireless N Starter Kit*



- Includes 1 DIR-615 Wireless N Router and 1 DWA-140 Wireless N USB Adapter

## Features & Benefits

- **Draft 802.11n WLAN Specifications**
  - » Latest high-performance wireless technology.
- **Superior Wireless Speed**
  - » Data transfer rates up to 14 times faster than the current 802.11g wireless devices, suitable for Internet DHTV, streaming video, online games, voice, and MP3 music.
- **Superior Signal Coverage Range**
  - » Wireless operation range up to 6 times farther than the current 802.11g devices, enables reception from greater distances.
- **Compatible with 802.11b/g and 802.11a/b/g**
  - » Single-band 802.11n draft devices operate in superior speed and range in 2.4GHz frequency band and are backward compatible with 802.11a/b/g devices.
  - » Dual-band 802.11n draft devices operate in superior speed and range in both 2.4GHz and 5GHz frequency ranges while are also backward compatible with existing 802.11a/b/g devices.
  - » Preservation of past investments in earlier standard wireless hardware and applications.
- **Automatic Channel Selection**
  - » The device senses the least used or non-occupied channels within the frequency band and automatically makes them available for wireless clients' connection.
- **User Limit Control**
  - » Administrators can set limit to the number of simultaneous wireless client connections to an AP or router to prevent the network performance from any drastic degradation.
- **64/128-Bit WEP Data Encryption**
  - » Protection of wireless data traveling in the air that are sent by the users.
- **WPA EAP/PSK, WPA2 EAP/PSK with TKIP, AES Support**
  - » Wireless LAN security including data encryption keys and user authentication for network access.
  - » Keeps out intruders located next door, upstairs or downstairs.
  - » Advanced encryption and security schemes for business environments.

Xtreme N uses the draft 802.11n specifications and 3 x 3 antenna designs to deliver real world performance of up to 14 times faster than 802.11g devices, and an operation range six times farther than 802.11g. Users can connect an Xtreme N router to a cable or DSL modem to create a fast, secure wireless network to share photos, files, music, video, printers, and network storage throughout a home or office. With a built-in award-winning QoS Engine, Xtreme N provides an outstanding Internet experience by keeping wireless digital phone calls (VoIP), streaming multimedia and online gaming smooth and responsive.

### DWA-652

#### *Xtreme N CardBus Adapter*



- Multiple Reception and Transmission Antennas to Boost Signal Strength
- Supports Windows

### DWA-643

#### *Xtreme N ExpressCard Adapter*



- Multiple Reception and Transmission Antennas to Boost Signal Strength
- Supports Windows

#### • **WPS Certified**

- » Wi-Fi Protected Setup (WPS) provides easy security setup for wireless clients from an AP or router. The AP and routers provide a WPS click button from a PC screen and a WPS push buttons from the devices themselves to let administrators broadcast settings to clients, eliminating the need for clients to manually key in encryption keys and settings to establish connection to network.

### DWA-552

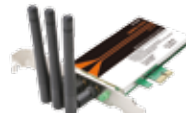
#### *Xtreme N PCI Adapter*



- 3 Dipole Antennas to Boost Signal Strength
- Supports Windows

### DWA-556

#### *Xtreme N PCIe Express Adapter*



- 3 Dipole Antennas to Boost Signal Strength
- Supports Windows

### DWA-160

#### *Xtreme N Dual Band USB Adapter*



- 2.4GHz and 5GHz Dual Band Operation
- Multiple Reception and Transmission Antennas to Boost Signal Strength
- Supports Windows, Linux

## DAP-1522

### *Xtreme N Duo Wireless Bridge/Access Point*



- Can Operate in either 2.4GHz or 5GHz Frequency Band
- Operable as AP or Bridge
- Both AP and Bridge Modes Support Dual Frequency Bands
- 4 Integrated 10/100/1000BASE-TX LAN Ports
- DFS2 Compliant
- WPS Certified

## DIR-855

### *Xtreme N Duo Media Router*



- 2.4GHz and 5GHz Dual Band Operation
- High-Performance CPU
- Gigabit WAN Port, 4 Gigabit LAN Ports
- 3 Dipole Antennas to Boost Signal Strength
- WMM & StreamEngine Intelligent QoS Technology
- MAC/IP-Based Access Control
- Domain/URL Filtering, Scheduling Parental Control
- SPI Firewall
- USB 2.0 Port for Windows Connect Now (WCN) Setup

## DIR-655

### *Xtreme N Gigabit Router*



- High-Performance CPU
- Gigabit WAN Port, 4 Gigabit LAN Ports
- 3 Dipole Antennas to Boost Signal Strength
- WMM & StreamEngine Intelligent QoS Technology
- MAC/IP-Based Access Control
- Domain/URL Filtering, Scheduling Parental Control
- SPI Firewall
- USB Port for Windows Connect Now (WCN) Setup

## DGL-4500

### *Xtreme N Gaming Router*



- User-Selectable 2.4GHz or 5GHz Frequency Band Operation
- High-Performance CPU
- Gigabit WAN Port, 4 Gigabit LAN Ports
- 3 Dipole Antennas to Boost Signal Strength
- WMM & Intelligent Game Traffic Prioritization GameFuel Engine
- MAC/IP-Based Access Control
- Domain/URL Filtering, Scheduling Parental Control
- SPI Firewall
- USB 2.0 Port for Windows Connect Now (WCN) Setup

## Features & Benefits

- **Draft 802.11n WLAN Specifications**
  - » Latest high-performance wireless technology.
- **Superior Wireless Speed**
  - » Data transfer rates up to 650% faster than the current 802.11g wireless devices for RangeBooster N 650, and up to 300Mbps for RangeBooster N.
  - » Suitable for Internet HDTV, streaming video, online games, voice, and MP3 music.
- **Superior Signal Coverage Range**
  - » Wireless operation range up to 5 times farther than the current 802.11g devices for RangeBooster N 650, and 4 times farther than the current 802.11g devices for RangeBooster N; signal reception/transmission at greater distances.
- **Compatible with 802.11b/g Devices**
  - » Seamless integration with current and earlier standard wireless devices.
  - » Preservation of past investments in earlier standard wireless hardware and applications.
- **User Limit Control**
  - » Administrators can set limit to the number of simultaneous wireless client connections to an AP or router to prevent the network performance from any drastic degradation.
- **64/128-Bit WEP Data Encryption**
  - » Protection of wireless data traveling in the air that are sent by the users.
- **WPA EAP/PSK, WPA2 EAP/PSK with TKIP, AES Support**
  - » Wireless LAN security including data encryption keys and user authentication for network access.
  - » Keeps out intruders located next door, upstairs or downstairs.
  - » Advanced encryption and security schemes for business environments.
- **WPS Certified**
  - » Wi-Fi Protected Setup (WPS) provides easy security setup for wireless clients from an AP or router. The AP and routers provide a WPS click button from a PC screen and a WPS push buttons from the devices themselves to let administrators broadcast settings to clients, eliminating the need for clients to manually key in encryption keys and settings to establish connection to network.

RangeBooster N 650 uses the draft 802.11n specifications and 3 x 3 or 2 x 3 antenna design to deliver real world performance of up to 650% faster than an 802.11g wireless connection. Users can connect a RangeBooster N 650 router to a cable or DSL modem to create a secure wireless network to share photos, files, music, video, printers, and network storage throughout a home or office. With a built-in award-winning QoS Engine, RangeBooster N 650 provides a better Internet experience by keeping digital phone calls (VoIP) and online gaming smooth and responsive.

RangeBooster N also employs the draft 802.11 n specifications, but uses the 2 x 2 antenna design to deliver up to 300Mbps data transfer rate and a signal range up to four times farther than 802.11g.

### DWA-645

#### *RangeBooster N 650 CardBus Adapter*



- 2 Reception Antennas, 3 Transmission Antennas to Boost Signal Strength
- Supports Windows

### DWA-642

#### *RangeBooster N CardBus Adapter*



- 2 Integrated Antennas to Boost Signal Strength
- Supports Windows

### DWA-547

#### *RangeBooster N 650 PCI Adapter*



- 3 Dipole Antennas to Boost Signal Strength
- Supports Windows

### DWA-542

#### *RangeBooster N PCI Adapter*



- 2 Dipole Antennas to Boost Signal Strength
- Supports Windows

## DWA-140

### RangeBooster N USB Adapter



- 2 Integrated Antennas to Boost Signal Strength
- Supports Windows, Linux

## DAP-1353

### RangeBooster N 650 Access Point



- 3 Dipole Antennas to Boost Signal Strength
- Operable as Wireless Client, AP, WDS, WDS with AP, or AP Repeater
- User Limit Control
- Multiple SSID, 802.1Q VLAN
- WMM (Wireless QoS)

## DIR-635








### RangeBooster N 650 Router



- 3 Dipole Antennas to Boost Signal Strength
- MAC/IP-Based Access Control
- Domain/URL Filtering, Scheduling Parental Control, SPI Firewall
- 4 10/100BASE-TX Ethernet LAN Ports
- USB Port for Windows Connect Now (WCN) Setup

## ANTENNAS

## 2.4 GHz / 5 GHz Antennas

							
Antenna	ANT24-1800	ANT24-1801	ANT24-2100	ANT70-0800	ANT70-0801	ANT70-1000	ANT70-1800
Frequency	2.4GHz	2.4GHz	2.4GHz	2.4GHz/5GHz	2.4GHz/5GHz	2.4GHz/5GHz	2.4GHz/5GHz
Signal Directivity	Directional	Directional	Directional	Omni-Directional	Omni-Directional	Directional	Directional
Application Range	Outdoor	Outdoor	Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Outdoor
Gain (Without Cable Loss)	18dBi	18dBi	21dBi	2.4GHz: 8dBi 5GHz: 8dBi	2.4GHz: 8dBi 5GHz: 8dBi	2.4GHz: 8dBi 5GHz: 10dBi	2.4GHz: 14dBi 5GHz: 18dBi
Approximate Range at 1/11/54Mbps (Using Indoor AP)	-	-	-	2.4GHz: 700 m/350 m/100 m 5GHz: 1 km/ 500 m/ 200 m	2.4GHz: 700 m/350 m/100 m 5GHz: 1 km/ 500 m/ 200 m	2.4GHz: 800 m/400 m/150 m 5GHz: 1.2 km/ 600 m/ 250 m	-
Approximate Range at 1/11/54Mbps (Using Outdoor AP)	8 km/ 6 km/ 1.5 m	8 km/ 6 km/ 1.5 km	12 km/ 9 km/ 2.5 m	2.4GHz: 800 m/450 m/150 m 5GHz: 1 km/ 500 m/200 m	2.4GHz: 800 m/450 m/150 m 5GHz: 1 km/ 500 m/200 m	2.4GHz: 1k m/500 m/200 m 5GHz: 1.5 km/ 700 m/300 m	2.4GHz: 6 km/4.5 km/1 km 5GHz: 8 km/5 km/1.5 km
Half Power Beam Width	H 15 V 15	H 15 V 15	H 5 V 8	2.4GHz: H 360 V 15 5GHz: H 360 V 15	2.4GHz: H 360 V 15 5GHz: H 360 V 15	2.4GHz: H 58 V 55 5GHz: H 45 V 45	2.4GHz: H 30 V 30 5GHz: H 15 V 15
Pigtail Cable Length	-	-	-	-	-	-	-
Antenna Fixed Connector	N-Jack	N-Jack	N-Jack	N-Jack	N-Jack	N-Jack	N-Jack
Surge Protector for Outdoor	Included	Included	Included	Included	Included	Included	Included
Default Extension Cable Length	50 cm	50 cm	3 m	50 cm	50 cm	50 cm	50 cm
Default Mounting Configuration	Wall/Pole	Pole	Pole	Pole	Pole	Pole	Pole
Optional Accessory	-	-	-	-	-	-	-
Optional Antenna Cable Kit	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series

#### Notes:

1. Extended range reference based on RF-output power 17dBm (indoor AP), 23dBm (outdoor AP) with default cable loss.
  2. Transmission distance range based on two antennas of the same specs with default cable loss.
  3. Effective range based on EIRP (Effective Isotropic Radiation Power = device output power + antenna gain - cable loss).
- HPBW: Half Power Beam Width, H: horizontal plane pattern, V: vertical plane pattern  
Actual range subject to change due to users' physical environment. All figures are for reference only.










## 2.4 GHz Antennas

							
Antenna	ANT24-0401	ANT24-0500	ANT24-0501	ANT24-0501C	ANT24-0502	ANT24-0600	DWL-R60AT
Frequency	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz
Signal Directivity	Omni-Directional	Omni-Directional	Omni-Directional	Omni-Directional	Omni-Directional	Directional	Directional
Application Range	Indoor Ceiling	Indoor/Outdoor	Indoor	Indoor	Indoor	Indoor	Indoor
Gain (Without Cable Loss)	3.5dBi	5dBi	5dBi	5dBi	5dBi	6dBi	6dBi
Approximate Range at 1/11/54Mbps (Using Indoor AP)	250 m/100 m/40 m	500 m/ 250 m/60 m	500 m/ 200 m/50 m	500 m/ 200 m/60 m	500 m/ 200 m/60 m	600 m/350 m/ 80 m	600 m/350 m/ 80 m
Approximate Range at 1/11/54Mbps (Using Outdoor AP)	-	1.5 km/ 1.3 km/ 200 m	-	-	-	-	-
Half Power Beam Width	H 360 V 120	H 360 V 32	H 360 V 36	H 360 V 36	H 360 V 40	H 68 V 80	H 70 V 85
Pigtail Cable Length	-	30 cm	150 cm	-	-	150 cm	-
Antenna Fixed Connector	SMA Jack	N-Jack	RP-SMA Plug	RP-SMA Plug	RP-SMA Plug	RP-SMA Plug	RP-SMA Plug
Surge Protector for Outdoor	-	Optional	-	-	-	-	-
Default Extension Cable Length	2 m	3 m	-	-	-	-	-
Default Mounting Configuration	Ceiling	Pole	Wall/Desktop/Magnetic	Attached to AP/Router	Attached to AP/Router	Wall/Desktop/Magnetic	Attached to AP/Router
Optional Accessory	-	ANT24-SP	-	-	-	-	-
Optional Antenna Cable Kit	-	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	-	-	-	-	-

### Notes:

1. Extended range reference based on RF-output power 17dBm (indoor AP), 23dBm (outdoor AP) with default cable loss.
  2. Transmission distance range based on two antennas of the same specs with default cable loss.
  3. Effective range based on EIRP (Effective Isotropic Radiation Power = device output power + antenna gain - cable loss).
- HPBW: Half Power Beam Width, H: horizontal plane pattern, V: vertical plane pattern  
Actual range subject to change due to users' physical environment. All figures are for reference only.

## Antenna Cable Kits

Access Point	Product Number	Jumper Cable	Surge Arrestor	Low Loss Cable	Overall System Loss	Application
	ANT24-ODU03M	-	-	 LMR200 0.3M	0.6dB	
	ANT24-ODU1M	-	-	 LMR400 1M	0.6dB	
	ANT24-ODU3M	-	-	 LMR400 3M	1.0dB	
	ANT24-DLK3M	 RP-TNC Multi-brand		 LMR400 3M	2.0dB	

## 2.4 GHz Antennas

								
<b>ANT24-0700</b>	<b>ANT24-0700C</b>	<b>ANT24-0800</b>	<b>ANT24-0801</b>	<b>ANT24-1200</b>	<b>ANT24-1201</b>	<b>ANT24-1400</b>	<b>ANT24-1500</b>	<b>ANT24-0230</b>
2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz *
Omni-Directional	Omni-Directional	Directional	Directional	Directional	Directional	Directional	Omni-Directional	Omni-Directional
Indoor	Indoor	Indoor/Outdoor	Indoor/Outdoor	Indoor	Outdoor	Outdoor	Outdoor	Indoor
7dBi	7dBi	8dBi	8.5dBi	12dBi	12dBi	14dBi	15dBi	1.8dBi
500 m/ 250 m/60 m	600 m/300 m/70 m	700 m/ 350 m/100 m	800 m/ 500 m/150 m	1.5 m/ 1.2 m/500 m	-	-	-	500 m/400 m/200 m/ 100 m/5 m **
-	-	2 km/ 1 km/ 400 m	2.5 km/ 1.5 km/ 600 m	-	3 km/ 2.5 km/ 1 Km	6 km/ 4.5 km/ 1 Km	4 km/ 2.5 km/ 500 m	-
H 360 V 24	H 360 V 24	H 360 V 15	H 70 V 65	H 80 V 23	H 50 V 50	H 30 V 30	H 360 V 8	H 360 V 70
150 cm	150cm	-	30cm	-	30 cm	30 cm	-	1.2 m
RP-SMA Plug	RP-SMA Plug	N-Jack	N-Jack	SMA Jack	N-Jack	N-Jack	N-Jack	PR-SMA Plug
-	-	Included	Included	-	Included	Included	Included	-
-	-	50 cm	3 m	3 m	50 cm	50 cm	3 m	-
Wall/Desktop/Magnetic	Attached to AP/Router	Pole	Wall/Pole	Window/Wall	Wall/Pole	Wall/Pole	Pole	Desktop
-	-	-	-	-	-	-	-	-
-	-	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	-	-	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	ANT24-CB Series ANT24-ODU Series ANT24-DLK Series	-

\* Use with 802.11n draft wireless AP, router or adapter

\*\* Approximate range at 1/11/54/108/270Mbps

## Antenna Cable Assemblies

	Cable Type	Cable Length
ANT24-CB03N	N-male to N-female	3 m
ANT24-CB06N	N-male to N-female	6 m
ANT24-CB09N	N-male to N-female	9 m
ECB-ANT241200	SMA-male to SMA-female	3 m
ECB-ANT240500	N-male to SMA-female	3 m
ECB-ANT240800	N-male to SMA-female	50 cm

All outdoor antennas include the following:



50cm pigtail (0.83db loss/meter)  
N-male to RP-SMA plug



**ANT24-SP**  
Lightning Surge Arrestor/Protector



## Features & Benefits

- **Centralized Management**
  - » Consistent user authentication and security policies. Easy identification of failed AP, easy swapping with new AP.
- **Pre-Set Configuration**
  - » Security can be pre-set and RF channels auto-adjusted for each AP. When an AP is removed or added, switch automatically configures new AP with same configuration of replaced unit. Sensitive information not locally stored at the AP.
- **Comprehensive Security**
  - » WEP/WPA/WPA2 data encryption, 802.1Q VLAN, up to 8 SSID per wireless frequency band.
- **Tracking/Maintenance of User Authentication**
  - » Continuous connection for each wireless user, better network security.
- **Fast Roaming**
  - » Wireless signals roamed not only across to AP connected to same switch, but also across AP connected to different switches, using inter-switch roaming.
- **Gigabit Connection**
  - » Fast signal roaming across AP at Gigabit speed. More difficult for thieves to intercept when signals are roamed via Ethernet cables.
- **Converged LAN/WLAN Deployment**
  - » No restriction on port usage. Any switch port can be used for wired or wireless purposes.
- **Easy Deployment**
  - » All switch ports support 802.3af PoE. AP supports 802.3af PoE, can be installed on high walls or ceilings away from AC power outlets. Switch's rack-mount design allows it to be hidden in equipment rack.
- **Scalable Expansion**
  - » Each switch can manage up to 48 AP. Up to 4 switches can be gradually added in a peer-to-peer configuration as more AP are deployed.
- **Rogue AP Detection**
  - » Identification of intruding AP for administrators to take proper actions.

Wireless switching - an evolution in wireless LAN - is designed to simplify installation and enhance the effectiveness of a medium-sized or large Wi-Fi network. It allows businesses to install a high-performance, secure, manageable and scalable unified wired/wireless network.

Wireless switching consists of one or multiple switches, and multiple wireless access points (AP). The switches are core units that consolidate the security, manage the bandwidth and maintain the intelligence of the entire wireless network. In addition to monitoring users' identities and maintaining their authentication as they roam, these switches can configure and control all aspects of the AP, including: RF channel and power management, wireless traffic segmentation, AP roaming and load balancing, rogue AP detection and AP access security. The AP can be dispersed throughout a site and directly attached to these switches, or indirectly connected through any Ethernet switch.

Traffic from wireless users is roamed not only across to the access points, but also among the peer wireless switches. In addition to intra-switch roaming, roaming across different subnets is also supported for secure wireless connection across multiple departments in a large enterprise. As roaming is through the Ethernet cable at the fast Gigabit speed, traffic bottlenecks are minimized and overall network performance is enhanced.

The AP, no matter where installed, are automatically discovered and centrally managed. As users move around the wireless network, all data information, translation, authentication paths and user tracking are executed on the switch end to provide network administrators with a consolidated and secure wireless system.

- **Flexible Deployment**
  - » In a unified LAN/WLAN deployment, D-Link's wireless switching architecture allows the switches to be placed deep inside an existing wired network, say in a data center, to protect current investments in infrastructure. Wireless traffic is tunneled to the switches for centralized data forwarding decision. An alternative would be to put the switches at the network edge for minimized users' distance from the AP, flexible scalability and distributed peer-to-peer WLAN switching.

## DES-1228P

### 24-Port PoE Ethernet Switch



- 24 PoE 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP for Uplink to LAN
- 2 10/100/1000BASE-T Ports
- Can Manage Up to 24 DWL-3140AP Access Points

## DWL-3140AP

### Wireless G Access Point



- 802.11g 2.4GHz WLAN Standard
- Up to 108Mbps Wireless Speed
- PoE, WMM Support
- Connects to/Managed by DES-1228P Switch
- Low Profile ID, True Omni-Antenna Design
- Smoke Detector Shape, Ceiling Mounting

## DWS-3024

### 24-Port Wireless Switch



- 24 PoE Gigabit Ports
- 4 Combo SFP for Fiber Connection to LAN
- Can Manage Up to 48 DWL-3500AP/8500AP Access Points
- Fast Gigabit-Speed Roaming
- Inter-Subnet Roaming Between Switches
- Expandable to 4 Peer DWS-3024/3026 Wireless Switches
- Optional Redundant Power Supply
- SNMP Manageable

## DWS-3026

### 24-Port Wireless Switch



- 2 Open Slots for 10-Gigabit Uplinks to LAN Backbone/Servers
- Can Manage Up to 48 DWL-3500AP/8500AP Access Points
- All Other Functions Same as DWS-3024

## DWL-3500AP

### Wireless Unified 108G Access Point



- 802.11g 2.4GHz WLAN Standard
- Up to 108Mbps Wireless Speed
- Plenum-Rated Housing with PoE Support
- Dual 5dBi Gain Antennas
- WMM QoS
- Rouge AP Detection
- AP Load Balancing
- WLAN STA Partitioning
- Connects Directly to DWS-3024/3026 Wireless Switch or Indirectly Through LAN Switch
- Can Also Be Deployed as Stand-Alone AP

## DWL-8500AP

### Wireless Unified 108AG Dual Band Access Point



- 802.11a/g 2.4GHz/5GHz Dual Band Operation
- Up to 108Mbps Wireless Speed <sup>1</sup>
- Plenum-Rated Housing with PoE Support
- Dual 5dBi Gain Antennas
- WMM QoS
- Rouge AP Detection
- AP Load Balancing
- WLAN STA Partitioning
- Connects Directly to DWS-3024/3026 Wireless Switch or Indirectly Through LAN Switch
- Can Also Be Deployed as Stand-Alone AP

## DEM-410X

### 1-Port 10-Gigabit Module



- 1 XFP Slot
- For Use with DWS-3026 Switch

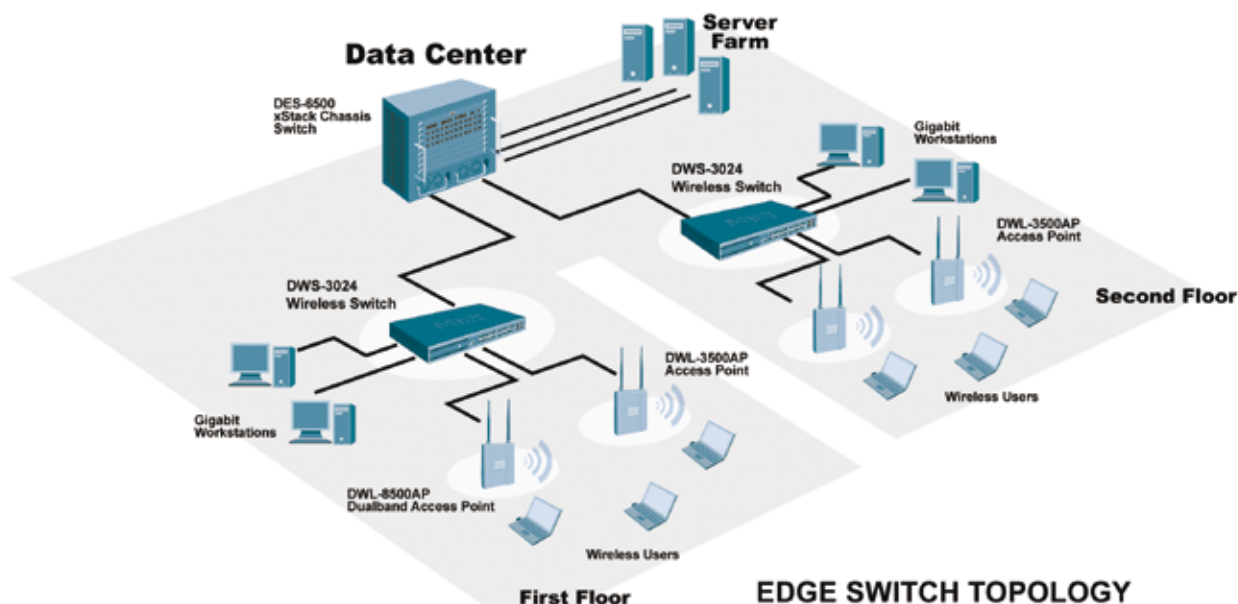
## DEM-410CX

### 1-Port 10-Gigabit Module



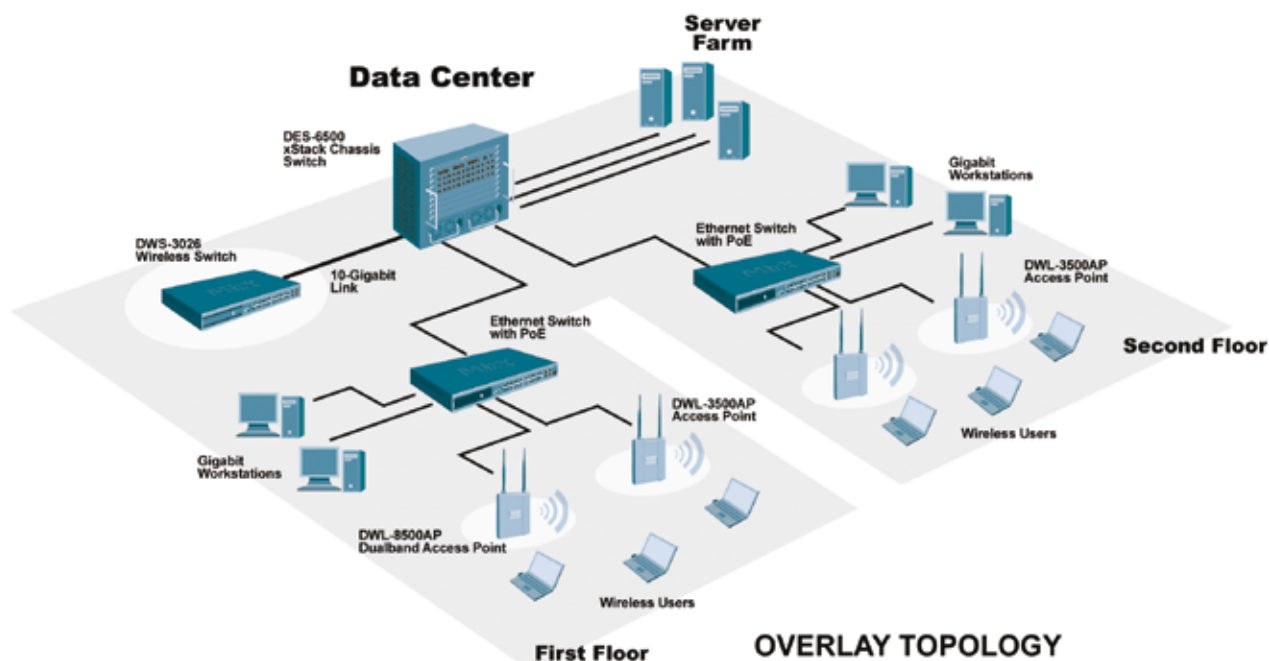
- 1 CX4 Port
- For Use with DWS-3026 Switch

<sup>1</sup> 108Mbps Turbo mode operation on 5GHz frequency band not allowed in EU countries.



## EDGE SWITCH TOPOLOGY

Deploying wireless switch at the network edge for maximum scalability. AP can be directly connected to and powered by the wireless switch.



## OVERLAY TOPOLOGY

Deploying wireless switch into the existing infrastructure without affecting the wired network. AP can be indirectly connected to and powered by the PoE switch.

### Features & Benefits

- **Bluetooth Profile Compliance**
  - » Interoperability with vendor-independent, Bluetooth standard-compliant devices.
- **Up to 2.1Mbps Wireless Transfer Rate (Bluetooth 2.0)**
  - » Up to 723.2 Kbps basic data rate, enhanced rate up to 2.1Mbps (asymmetrical) or 1.5Mbps (symmetrical). Asymmetrical rates are used for data transfer (PC to mobile phone or PC to web); symmetrical rates are used for voice (mobile phone to headset).
  - » Decent speed within a convenient range between Bluetooth-enabled devices.
- **Up to 10 or 20 Meters' Operation Range**
  - » Operation range depends on antenna capability.
- **128-Bit Data Encryption**
  - » Security protection for data transferred in the air among Bluetooth-enabled devices.
- **Adaptive Frequency Hopping (AFH) Function (Bluetooth 1.2, 2.0)**
  - » Uses Enhanced Inquiry Scan for immediate Frequency Hopping Synchronization (FHS) response.
  - » Automatically selects any unused frequency channels to establish a connection.
  - » Maintains a high level of connection when operating in environments where 2.4GHz Wi-Fi devices are also present.

For those without Wi-Fi at home, at school, in the office or outdoor, Bluetooth provides a convenient and cost-effective wireless networking solution. Applications include web access on PDA and laptops at unconnected locations, wireless network printer sharing and wireless access to Ethernet LAN servers and Internet/Intranet services from Bluetooth-enabled devices.

D-Link Bluetooth 2.0 offers up to 2.1Mbps asymmetrical and 1.5Mbps symmetrical data transfer rates - three times the speed of Bluetooth devices using the earlier 1.x standards. Operating on the globally available 2.4GHz radio frequency, Bluetooth 2.0 is backward compatible with Bluetooth 1.1 and 1.2 devices and transfers data with them using the lower Bluetooth 1.1/1.2 transmission speeds.

Low power consumption is designed into D-Link Bluetooth; a result is a very low power demand on the portable devices. This saves the battery power while giving users the freedom to roam among the Bluetooth-enabled devices.

**Personal Air**



#### DBT-122

##### USB Bluetooth Adapter



- Bluetooth 2.0 Class 2 Compliant
- Up to 2.1Mbps Asymmetrical, 1.5Mbps Symmetrical Transfer Rates
- USB 2.0 Connection to PC
- Adaptive Frequency Hopping (AFH) Function
- Internal Antenna With Up to 10 m Operating Range<sup>1</sup>
- 128-Bit Encryption
- Supports Windows, Mac OS

#### DBT-900AP

##### Bluetooth-to-Ethernet Access Point



- Bluetooth 1.1 Class 2 Compliant
- Up to 723Kbps Transfer Rate
- Enables Bluetooth Devices to Access Services on Ethernet Networks (E-Mail, File Transfer, Internet Logon)
- Ethernet Connection with DHCP Assignments
- User Access Authorization/Authentication
- Simultaneous Access to Internet/Intranet
- External Antenna With Up to 20 m Operating Range<sup>1</sup>
- 56-Bit Data Encryption
- Works Seamlessly With Computers & PDA<sup>2</sup>

<sup>1</sup> Environmental factor may adversely affect range.

<sup>2</sup> Computers and PDAs connecting to DBT-900AP must be Bluetooth-enabled with PAN Profile support.

## Features & Benefits

- **Ultra-Wideband Frequency, Low Energy Level**
  - » 3.1GHz to 10.6 GHz radio transmission range.
  - » Limited transmit power of -41dBm/MHz.
  - » Provides dramatic channel capacity at short range that limits interference.
- **Convenient Wireless Connection**
  - » Digital camcorders can play just-recorded videos on an HDTV without troublesome wiring.
  - » Portable MP3 player can stream audio to surround sound speakers from anywhere in the room.
  - » Mobile computer can wirelessly connect to a digital projector in a conference room to deliver presentation.
  - » Digital pictures can be sent to a USB printer without any cable.
  - » PC can wirelessly connect to printer, scanner or external storage from a USB port.
  - » Future products such as Camera and Printers will have Wireless USB connectivity built-in, making Wireless USB networking even more compelling.
- **No Interference with Other Appliances' Radio Frequencies**
  - » Wireless USB doesn't interfere largely with other more traditional 'narrow band' and continuous carrier wave uses in the same frequency band.
  - » Ensures co-existence with other wireless network and home appliances.
  - » Regulatory settings in different countries should provide efficient use of scarce radio bandwidth while enabling both high data rate personal-area network (PAN) wireless connectivity and longer-range, low data rate applications as well as radar and imaging systems.
- **Certified Wireless USB**
  - » Ensures interoperability with other Wireless USB supported devices.

D-Link Wireless USB brings convenience and mobility to high-speed interconnects in devices throughout the digital home and office. It uses the Ultra-Wideband (UWB) technology based on the WiMedia standard, and is designed for low-power, short-range, wireless personal area networks (WPAN).

Wireless USB enables wireless connection of multiple devices for transmission of video, audio and other high-bandwidth data. It uses the short-range radio technology to complement other longer range radio technologies such as Wi-Fi and WiMAX, and cellular wide area communications. Its combination of broader spectrum and lower power improves speed and reduces interference with other wireless spectra. Wireless USB relays data from a host device to other devices in the immediate area of up to 10 meters.

### DUB-1210

#### Wireless USB Adapter



- USB 2.0 Port
- For Desktop and Notebook PC Connection
- Supports Windows



### DUB-2240

#### Wireless USB Hub



- 4 USB 2.0 Type A (Downstream) for USB Device Connection
- 1 USB Type B (Cable Association)

### DUB-9240

#### Wireless USB Starter Kit

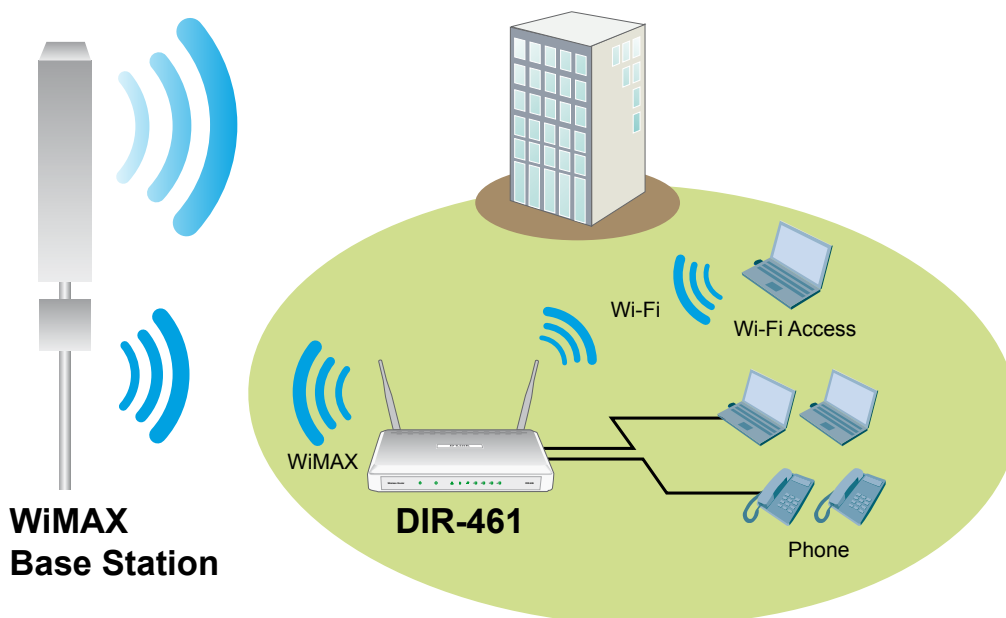


- Includes 1 DUB-1210 Wireless USB Adapter & 1 DUB-2240 Wireless USB Hub

## 3G MOBILE COMMUNICATION



## WiMAX COMMUNICATION





## Features & Benefits

- **Wireless Networking on the Go**

- » Creation of wireless network for co-workers to remote access office network from a remote site.
- » Wireless Internet access for passengers on train, bus or boat.

- **Mobile Video Transmission**

- » Direct connection of video cameras to high-speed 3G/3.5G services to upload pictures from a web camera as the car is driven around.

- **Internet Access from 3G/3.5G Service Subscribers**

- » ShareInternet among home users where DSL or cable broadband wired connection is not available.

- **Emergency/Mobile Applications**

- » Ideal for mobile users in press media, finance/construction industries, police/emergency rescue teams, impromptu LAN parties at airports, hotels, convention halls.

The 3G/3.5G mobile adapters and routers provide broadband access for mobile workgroups. Instead of connecting to a DSL or cable landline, they use the 3G/3.5G services of mobile network operators. These adapters and routers are ideal for mobile PC users, work teams, emergency response units, and corporate commute vehicles that need to provide an Internet connection while on the move. As they are affordable in price, they can also be used by 3G/3.5G service subscribing consumers to connect to the Internet or set up hot spots without being tied to a single location. They allow users to access private networks away from the office where a cable or DSL Internet connection is not available.

### DWM-652

#### *HSDPA/UMTS/EDGE/GPRS/GSM 3.5G Mobile ExpressCard*



- Downstream Data Rates: 7.2M/3.6M/1.8M/1.2M/384Kbps \*
- Upstream Data Rates: Up to 384Kbps \*
- GSM Band (GSM/GPRS/EDGE): 850, 900, 1800, 1900MHz
- UMTS Band (WCDMA/HSDPA): 850, 1900, 2100MHz
- Automatic HSDPA-WCDMA-GPRS Handover
- Radio Mode Selection: 3G/3.5G for WCDMA/HSDPA, 2G Only for GSM/GPRS/EDGE, 2G+3G/3.5G dual-mode
- Supported Interfaces: ExpressCard, USB Adapter Provided, PCMCIA Adapter Optional

### DIR-451

#### *UMTS/HSDPA 3G Mobile Router*



- 32-Bit CardBus Slot for Insertion of 3G Internet PC Card
- Compatible with UMTS and HSDPA Standard Mobile Networks
- UMTS: Up to 2Mbps Download 384Kbps Upload Internet Speed\*
- HSDPA: Up to 7.2Mbps Download 384Kbps Upload Internet Speed\*
- Integrated 802.11g Wireless LAN (Up to 108Mbps Turbo Speed)
- 4 10/100BASE-TX Ethernet Ports for Computer Connection
- USB 2.0 Port for Windows Connect Now (WCN) Setup
- WPA EAP/PSK, WPA2 EAP/PSK, TKIP, AES, 64/128/152-Bit WEP WLAN Security
- MAC/IP Address-Based User Access Control
- SPI Firewall Protection

### DIR-450

#### *EVDO 3G Mobile Router*



- 32-Bit CardBus Slot for Insertion of 3G Internet PC Card
- Compatible with EV-DO Standard Mobile Networks
- Up to 2.4Mbps Download 153Kbps Upload Internet Speed\*
- Integrated 802.11g Wireless LAN (Up to 108Mbps Turbo Speed)
- 4 10/100BASE-TX Ethernet Ports for Computer Connection
- USB 2.0 Port for Windows Connect Now (WCN) Setup
- WPA EAP/PSK, WPA2 EAP/PSK, TKIP, AES, 64/128/152-Bit WEP WLAN Security
- MAC/IP Address-Based User Access Control
- SPI Firewall Protection

\* Speed depends on 3G or 3.5G card and operator's offering.



## Features & Benefits

### • Broadband Access

- » WiMAX as the "last mile" connectivity at high data rates.
- » Broadband access to places where it has been economically unavailable.

### • Disaster Relief

- » Providing broadband access to help regenerate communication when all communication infrastructure was destroyed.

### • IEEE 802.16e-2005 Standard

- » Latest industry specifications ensure a high level of interoperability with other WiMAX products.
- » Lower frequencies used for inherent signal attenuation and improved range and in-building penetration.

### • Integrated Wi-Fi Sub-systems

- » Shorter range wireless access system of a few hundreds of meters' radius, using free unlicensed spectrum to provide access to a broadband network.
- » Wi-Fi used by end-users to access their own network, which may or may not be connected to the Internet.

### • Integrated Internet Phone (VoIP)

- » Voice communication over the Internet WiMAX broadband connection at no phone charge or nominal fee.

### • Versatile Applications

- » Connecting Wi-Fi hotspots with each other and to other parts of the Internet.
- » Providing a wireless alternative to cable and DSL for last mile broadband access.
- » Providing high-speed data and telecommunications services.
- » Providing a diverse source of Internet connectivity as part of a business continuity plan. If a business has a fixed and a wireless Internet connection, especially from unrelated providers, they are unlikely to be affected by the same service outage.
- » Providing nomadic connectivity.

D-Link WiMAX adapters and routers provide wireless mobile long-range connection, covering many kilometers of spectrum to deliver Internet connection to WiMAX end users. These adapters are portable units and connect PC users through a PCMCIA or USB interface to WiMAX Base Stations deployed by WiMAX Internet Service Providers. Similarly, the WiMAX routers connect a group of users to WiMAX Base Stations also deployed by WiMAX ISP. PC users in turn connect to the WiMAX routers through 802.11 Wi-Fi wireless or 802.3u Ethernet interfaces.

D-Link WiMAX provides standard-based broadband services for mobile operators. It is based on the 802.16e-2005 standard and uses the OFDMA PHY as the interface technology. It employs Mobile WiMAX implementations and smart antenna subsystems for guaranteed signal transmission and reception. It can be used to deliver both fixed and mobile applications to wide-ranging situations.

## DIR-460

### WiMAX Modem

- Mobile Broadband Connection for Workgroups
- Dual Dipole Antennas to Boost Signal Strength
- 10/100BASE-TX Ethernet for Router or PC Host Connection
- USB 2.0 Port

## DWM-110

### WiMAX USB Adapter



- Mobile Broadband Connection for Notebook and Desktop PC
- Multiple Embedded Antennas to Boost Signal Strength
- Supports Windows

## DIR-461

### WiMAX Router



- Mobile Broadband Connection for Workgroups
- Dual Dipole Antennas to Boost Signal Strength
- Integrated 802.11g Wireless LAN
- Built-in 4-Port Ethernet Switch for Wired LAN Connection
- USB 2.0 Port for Windows Connect Now

## DIR-462

### WiMAX VoIP Router



- Mobile Broadband Connection for Workgroups
- Dual Dipole Antennas to Boost Signal Strength
- Integrated 802.11g Wireless LAN
- Integrated Voice over Internet Communication (2 FXS Ports, SIP Protocol)
- Built-in 4-Port Ethernet Switch for Wired LAN Connection
- USB 2.0 Port for Windows Connect Now

## DIR-610

### WiMAX CardBus Adapter



- Mobile Broadband Connection for Notebook PC
- Dual Dipole Antennas to Boost Signal Strength
- Supports Windows

### Features & Benefits

- **Easiest Installation**

- » SECURESPOT provides the industry's easiest installation, Plug n' Play security for the entire home.
- » Works with any home broadband Ethernet router (Cable or DSL), Windows and Mac OS.

- **Unique Character**

- » Single box with a thin client on each PC vs. multiple software applications on each PC.
- » All the necessary required functions: parental controls, usage blocking and reporting.

- **Thin Client on PC**

- » Protection services travel with the LAN PCs. No matter where the PCs go, they are protected as long as they are connected to the Internet.

- **Total Network Security**

- » Three levels of security: 1) on the web, 2) at the SECURESPOT device, 3) thin client application on each PC.
- » Includes one year of protection for all services on up to four PCs, renewable annually.
- » Easier to manage than multiple licenses for multiple programs on multiple PCs.
- » Includes: Parental Control; Pop-Up Blocker; Anti-Virus Scanning and Protection; Spam Blocker; Anti-Spyware Scanning and Protection; Identity Theft Protection; Usage Reports; Block Usage by Time Schedule; Manage Network Security Settings of all PCs from a Single Location.
- » Protection software is automatically updated and SECURESPOT is always up-to-date.
- » Customizable security services to suit personal preferences.

- **No Degradation of PC**

- **Performance**

- » SECURESPOT uses less system resources than multiple programs.

- **Expandability**

- » SECURESPOT protects unlimited additional PCs on home network (additional license required).

- **VoIP Accelerator**

- » QoS support to optimize upstream bandwidth for VoIP Internet phone.

SECURESPOT is an all-in-one home Internet security device with parental controls. Designed for the consumers that need greater network security, but who would rather avoid the complications of software-based security, this device combines the functions of several different security software applications in a single box with the easiest installation. SECURESPOT addresses every kind of threat parents are worried about, and provides constantly monitored and updated Internet protection services.

**SECURESPOT is ideal for:**

- Families with high-speed Internet access and multiple PCs.
- Parents that want to monitor and protect their children from certain websites and web content. It can block usage by time schedule.
- Small businesses with up to ten employees.

**securespot**  
TOTAL NETWORK SECURITY by D-Link



### Three Layers of Security



### DSD-150

#### SECURESPOT



- Firewall Protection for Home/SOHO
- 10/100BASE-TX Ethernet WAN Port
- 10/100BASE-TX Ethernet LAN Port
- VoIP Accelerator
- Parental Control, Pop-Up & Spam Blocker
- Anti-Virus Scanning & Protection
- Anti-Spyware Scanning & Protection
- Identity Theft Protection
- Includes One Year of Protection Services for 4 PC

### Features & Benefits

- Secure IPSec Client Internet Connection
- Protects Against Thieves for Private Data Traveling On Internet
- Connects Remote, Home Users to Office Network
- Allows Organizations to Build End-to-End Secure Connectivity for Mobile Employees/Telecommuters
- Easy-to-Deploy Windows-Based Software
- Standard-Based IPSec Tunneling
- Advanced 3DES/AES Data Encryption
- Supports All D-Link VPN IPSec Routers & NetDefend Firewalls

The VPN Client Software is a versatile and economical IPSec client program to secure a VPN connection from a remote user to an office network terminated with an IPSec gateway, such as a D-Link VPN router or NetDefend integrated services firewall. The connection can be established over a wired or wireless network, the public Internet or a private network.

Running on a Windows-based PC, this software complies with IPSec standards and meets the highest security requirements. It provides an integrated personal firewall shields against attacks from the Internet. The software uses standard IPSec implementation with advanced 3DES/AES encryption and provides NAT transparency to work with most home gateways and NAT routers. It supports RADIUS authentication for access screening from a centralized user database at the office network side.



### DS-601 / DS-605

#### *Network Security VPN Client*



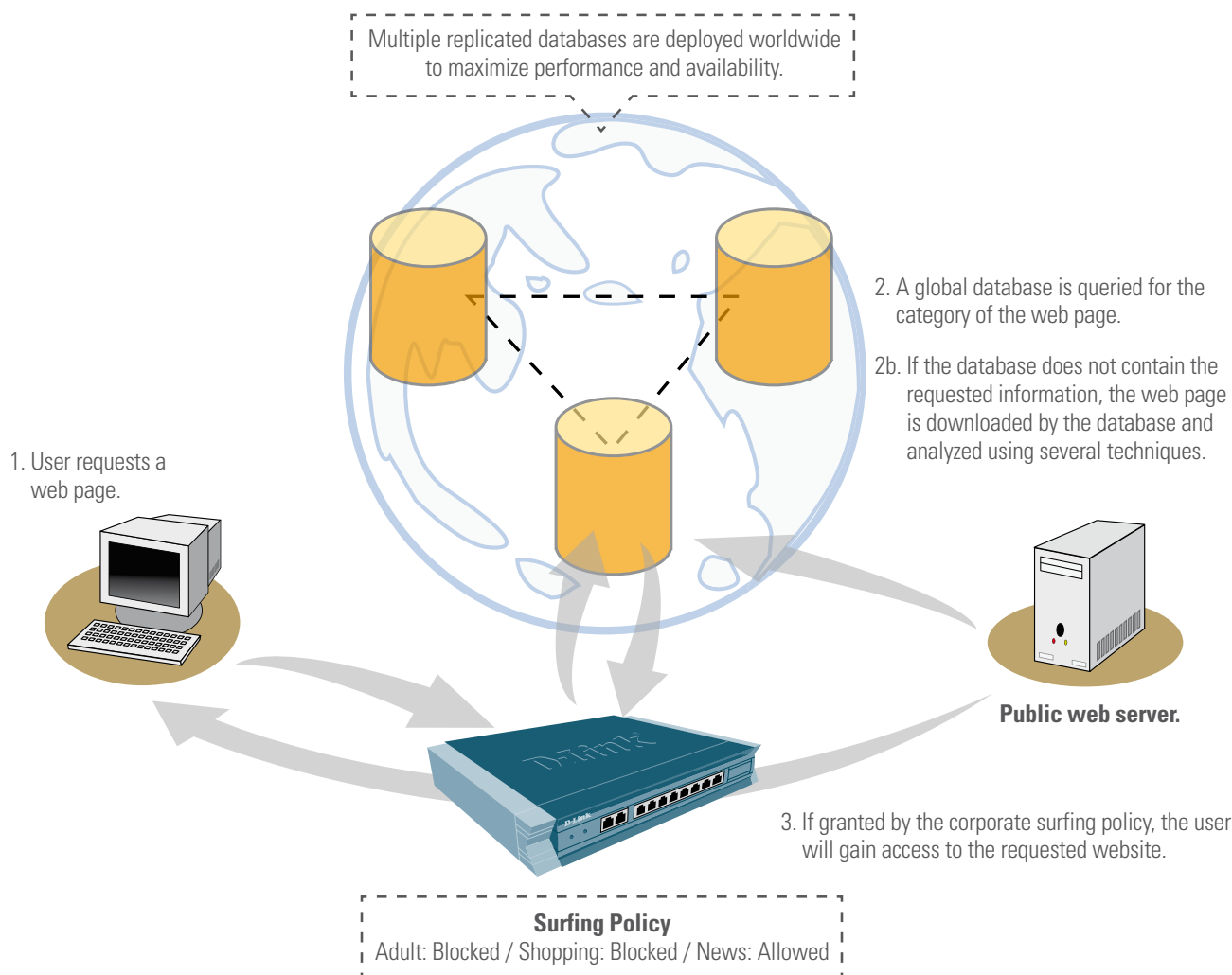
- Available in 2 Versions
- DS-601: Single User's License
- DS-605: 5 Users' License
- VPNC-Certified

The IPS (Intrusion Prevention System) firewalls provide an all-in-one business-class security solution with integrated functions including firewall, load balance, fault tolerance, content filtering, user authentication, Denial of Service (DoS) protection, Virtual Private Network (VPN) remote connection and malicious internal traffic prevention. These firewalls come with multiple user-configurable interfaces, including high-speed Gigabit ports, for flexible, bottleneck-free network deployments linking different workgroups and enterprises together.






D-Link NetDefend firewalls adopt a unique IPS technology - component-based signatures, which are built to recognize and protect against all varieties of known and unknown attacks, and which can address all critical aspects of an attack or potential attack including payload, NOP sled, infection, and exploits. In terms of signature coverage, the IPS database includes attack information and data from a global attack sensor-grid and exploits collected from public sites such as the National Vulnerability Database and Bugtrax. These firewalls deliver high quality IPS signatures by constantly creating and optimizing NetDefend signatures via the D-Link Auto-Signature Sensor System. Without overloading existing security appliances, these signatures ensure a high ratio of detection accuracy and the lowest ratio of false positives.

To minimize any impact of a disaster on an entire network, D-Link NetDefend firewalls include a special feature called ZoneDefense - a mechanism that operates seamlessly with D-Link xStack switches to perform proactive network security. ZoneDefense automatically quarantines infected computers on the network and prevents them from flooding the network with malicious traffic.

D-Link NetDefend firewalls can be remotely managed via a web-based interface or through a dedicated VPN connection. They include flexible features to monitor and maintain a healthy and secure network, such as e-mail alerts, system log and real-time statistics.



# NetDefend IPS Firewall

IPS Firewall		DFL-200 For SOHO	DFL-210 For Workgroups & Branch Offices	DFL-800 For Small Businesses	DFL-1600 For Medium-Sized Businesses	DFL-2500 For Enterprises
Function/Feature						
Interface	Ethernet: 10/100BASE-TX Ports Gigabit: 10/100/1000BASE-T Ports	1 Ethernet WAN 1 Ethernet DMZ 4 Ethernet LANs	1 Ethernet WAN 1 Ethernet DMZ (User-Configurable) 4 Ethernet LANs	2 Ethernet WANs 1 Ethernet DMZ 7 Ethernet LANs	6 User-Configurable Gigabit Ports	8 User-Configurable Gigabit Ports
System Performance	Firewall Throughput VPN Throughput Concurrent Sessions Policies	50Mbps 10Mbps 3,000 500	80Mbps 25Mbps 12,000 500	150Mbps 60Mbps 25,000 1,000	320Mbps 120Mbps 400,000 2,500	600Mbps 300Mbps 1,000,000 4,000
Firewall System (ICSA Certified)	Transparent Mode	Proxy ARP	✓	✓	✓	✓
	NAT, PAT	✓	✓	✓	✓	✓
	Dynamic Routing Protocol			OSPF	OSPF	OSPF
	H.323 NAT Traversal		✓	✓	✓	✓
	Application Layer Gateway (ALG)	✓	✓	✓	✓	✓
Networking	Proactive Network Security			ZoneDefense	ZoneDefense	ZoneDefense
	DHCP Server/Client	✓	✓	✓	✓	✓
	DHCP Relay	✓	✓	✓	✓	✓
	Policy-Based Routing		✓	✓	✓	✓
	802.1q VLAN		✓	✓	✓	✓
VPN (ICSA Certified)	IP Multicast		IGMP v3	IGMP v3	IGMP v3	IGMP v3
	Encryption Methods (DES/3DES/AES/Twofish/Blowfish/CAST-128)	DES/3DES/AES Only	All Methods	All Methods	All Methods	All Methods
	Dedicated VPN Tunnels **	80	100	300	1,200	2,500
	PPTP/L2TP Server	✓	✓	✓	✓	✓
	Hub and Spoke	✓	✓	✓	✓	✓
Traffic Balancing/ Sharing	IPSec NAT Traversal	✓	✓	✓	✓	✓
	Dead Peer Detection	✓	✓	✓	✓	✓
	Outbound Load Balancing *		When DMZ Configured as WAN 2	✓	✓	✓
	Server Load Balancing			✓	✓	✓
	Policy-based Load Sharing		✓	✓	✓	✓
Bandwidth Management	Traffic Redirect When Fail-Over		✓	✓	✓	✓
	Policy-Based Traffic Shaping		✓	✓	✓	✓
	Guaranteed Bandwidth		✓	✓	✓	✓
	Maximum Bandwidth		✓	✓	✓	✓
	Priority Bandwidth		✓	✓	✓	✓
Intrusion Detection & Prevention (IPS/IDP)	Dynamic Bandwidth Limit Balancing		✓	✓	✓	✓
	DiffServ		✓	✓	✓	✓
	Protocol Anomaly Detection	✓	✓	✓	✓	✓
	Automatic Signature Update	✓	✓	✓	✓	✓
	DoS/DDoS Protection	✓	✓	✓	✓	✓
Email Security	Attack Alarm Via Email	✓	✓	✓	✓	✓
	Advanced IPS/IDP Subscription	✓	✓	✓	✓	✓
	Email Blacklist/Exempt List Filtering		✓	✓	✓	✓
	Anti-Spam		✓	✓	✓	✓
High Availability	Email Rate Protection		✓	✓	✓	✓
	Email Size Protection		✓	✓	✓	✓
	Active-Passive HA mode				✓	✓
	Device Failure Detection				✓	✓
Information Security	Stateful Failover (Firewall & VPN)				✓	✓
	Notification on Failover				✓	✓
IM/P2P Application Support			***	***	***	***

\* Function available in future firmware upgrade.

\*\* Include PPTP, L2TP and IPSec tunnels; all included VPN tunnels are licensed.

\*\*\* Supported IM/P2P applications include AIM, AOL, Ares P2P, BitTorrent, Direct Connect, eMule, Gnutella, Google Talk, IRC, KaZaA, MSN, WinMX, Yahoo! Messenger (Based on Advanced IPS signature database).



The NetDefend UTM firewalls incorporate an Intrusion Prevention System (IPS), gateway Anti-Virus (AV), and Web Content Filtering (WCF) for superior Layer 7 content inspection protection. These firewalls use a hardware accelerator approach to increase IPS and AV throughput, and a web surfing control database containing millions of URLs for WCF. IPS, Anti-Virus and URL database real-time update services protect enterprise networks from application exploits, network worms, malicious code attacks, and provide everything businesses need to manage employee Internet access behavior. Maintaining an effective defense against the various threats originating from the Internet requires that all three databases used by the UTM firewalls are kept up-to-date. In order to provide a robust defense, D-Link offers NetDefend Firewall UTM Services which include distinct NetDefend service updates for each aspect of network defenses: IPS, Anti-Virus, and WCF. NetDefend Firewall UTM Services ensure that each of the UTM firewall's service databases is always accurate and current.

### The UTM firewalls feature:

- Real-time AntiVirus Gateway Inspection (AV)
- Automatic signature update
- Web Content Filtering (WCF)
- Professional Intrusion Prevention System (IPS)
- Zero Day Attack protection
- Low-cost licensing using per-firewall service maintenance

The UTM firewalls are shipped with 12 months' Intrusion Prevention System (IPS) subscription, 12 months' Anti-Virus (AV) subscription, and 90 days' Web Content Filtering (WCF) subscription - free of charge. Upon expiration of these free subscription services, users can extend their subscriptions by purchasing NetDefend UTM subscriptions for selective services.



UTM Firewall		DFL-260 For Workgroup & Branch Office	DFL-860 For Small Business
Function/Feature			
Interface	10/100BASE-TX Ethernet Ports	1 WAN 1 DMZ (User-Configurable) 4 LAN	2 WAN 1 DMZ 7 LAN
System Performance	Firewall Throughput VPN Throughput Concurrent Sessions Policies	80Mbps 25Mbps 12,000 500	150Mbps 60Mbps 25,000 1,000
Firewall System (ICSA Certified)	Transparent Mode	✓	✓
	NAT, PAT	✓	✓
	Dynamic Routing Protocol	✓	OSPF
	H.323 NAT Traversal	✓	✓
	Application Layer Gateway (ALG)	✓	✓
Networking	Proactive Network Security	✓	ZoneDefense
	DHCP Server/Client	✓	✓
	DHCP Relay	✓	✓
	Policy-Based Routing	✓	✓
	802.1q VLAN	✓	✓
VPN (ICSA Certified)	IP Multicast	IGMP v3	IGMP v3
	Encryption Methods	DES, 3DES, AES, Twofish, Blowfish, CAST-128	DES, 3DES, AES, Twofish, Blowfish, CAST-128
	Dedicated VPN Tunnels **	100	300
	PPTP/L2TP Server	✓	✓
	Hub and Spoke	✓	✓
Traffic Balancing/ Sharing	IPSec NAT Traversal	✓	✓
	Outbound Load Balancing *	When DMZ Configured as WAN 2	✓
	Server Load Balancing	✓	✓
	Policy-based Load Sharing	✓	✓
	Traffic Redirect When Fail-Over	✓	✓
Bandwidth Management	Policy-Based Traffic Shaping	✓	✓
	Guaranteed Bandwidth	✓	✓
	Maximum Bandwidth	✓	✓
	Priority Bandwidth	✓	✓
	Dynamic Bandwidth Limit Balancing	✓	✓
Email Security	DiffServ	✓	✓
	Email Blacklist/Exempt List Filtering	✓	✓
	Anti-Spam	✓	✓
	Email Rate Protection	✓	✓
	Email Size Protection	✓	✓
Information Security	IM/P2P Application Support	***	***
Intrusion Detection & Prevention (IPS/IDP)	Protocol Anomaly Detection	✓	✓
	Automatic Pattern Update	✓	✓
	DoS, DDoS Protection	✓	✓
	Attack Alarm via Email	✓	✓
	URL Based	URL Blacklist/Exempt List	URL Blacklist/Exempt List
Web Content Filtering	Active Content Handling	Java, Cookie, ActiveX, VB	Java, Cookie, ActiveX, VB
	Real-Time Intelligent Database	✓	✓
	Over 30 Filtering Categories	✓	✓
Anti-Virus	Real Time AV Scanning	✓	✓
	Unlimited File Size	✓	✓
	Scans VPN Tunnels	✓	✓
	Supported Compression File	✓	✓
	Signature Licensor	Kaspersky	Kaspersky
	Automatic Pattern Update	✓	✓



\* Available in future firmware upgrade  
 \*\* Include PPTP, L2TP and IPSec tunnels; all included VPN tunnels are licensed.  
 \*\*\* Supported IM/P2P applications include Aimint, AOL, Ares P2P, BitTorrent, Direct Connect, eMule, Gnutella, Google Talk, IRC, KaZaA, MSN, WinMX, Yahoo! Messenger (Based on Advanced IPS signature database).



### Features & Benefits

- **Focus on Attack Payload, not Attackers or IP Addresses**
  - » In-depth inspection of data from Layer 2 to Layer 7 protecting against both false positives and false negatives
  - » Prevention of various types of network-based threats with a high degree of accuracy
- **IM and P2P Management**
  - » Signatures to manage Instant Messaging (IM) and Peer-to-Peer (P2P) applications in the network
- **Zero Day Attack Protection**
  - » Capture of variations of attacks and stealthy malicious traffic to prevent outbreaks of these threats without creating unnecessary new signatures while still protecting against Zero-Day attacks
- **Continuous Automatic Signature Updates**
  - » All IPS signatures are continuously updated automatically and made available through D-Link update servers worldwide
  - » Keeps users' IPS signature database as current as possible at the outside of new threats
- **Comprehensive IPS Signature Database**
  - » Protects system against network attacks using over 1,800 signatures as well as protocol anomaly inspection
- **Complete IPS Signature Advisory**
  - » Complete IPS logs with vulnerability ID numbers, severity levels, attack descriptions, and recovery solutions
  - » Enable MIS personnel to know about and respond quickly to network attacks

The IPS service for D-Link NetDefend firewall adopts component-based signatures, which are built to recognize and protect against all varieties of known and unknown attacks, and which address all critical aspects of an attack or potential attack including payload, NOP sled, infection, and exploits. In terms of signature coverage, the IPS database includes attack information and data from a global attack sensor-grid and exploits collected from public sites such as the National Vulnerability Database and Bugtrax.

IPS signatures are constantly created and optimized signatures via the Auto-Signature Sensor System. Without overloading existing security appliances, IPS signatures ensure a high ratio of detection accuracy and the lowest ratio of false positives.

NetDefend users need to register their firewall to receive IPS update service from the NetDefend Center. The current status of all registered products will be presented, including Model Names, MAC addresses, Serial Numbers, Registration dates, and IPS Service Expiration dates.

The NetDefend Center includes a "NetDefend Live" service for users. NetDefend Live is a platform for providing information about potential security breaches and associated advisories. When D-Link Security Center discovers new exploits and releases new signatures, associated security advisories will be simultaneously updated. This update frequency is provided on an around-the-clock basis. The main purpose of NetDefend Live is to help users know more about new signatures and vulnerabilities. MIS departments can use NetDefend Live as reference to uproot threats and patch vulnerabilities within the enterprise before they are exploited. With NetDefend firewalls as the first line of defense and NetDefend Live as the second, D-Link helps customers to counteract emerging network threats promptly, before they have an impact on business.



<b>DFL-210-IPS-12</b>	1 Year IPS Subscription for DFL-210 Firewall
<b>DFL-800-IPS-12</b>	1 Year IPS Subscription for DFL-800 Firewall
<b>DFL-1600-IPS-12</b>	1 Year IPS Subscription for DFL-1600 Firewall
<b>DFL-2500-IPS-12</b>	1 Year IPS Subscription for DFL-2500 Firewall
<b>DFL-260-IPS-12</b>	1 Year IPS Subscription for DFL-260 UTM Firewall
<b>DFL-860-IPS-12</b>	1 Year IPS Subscription for DFL-860 UTM Firewall



### Features & Benefits

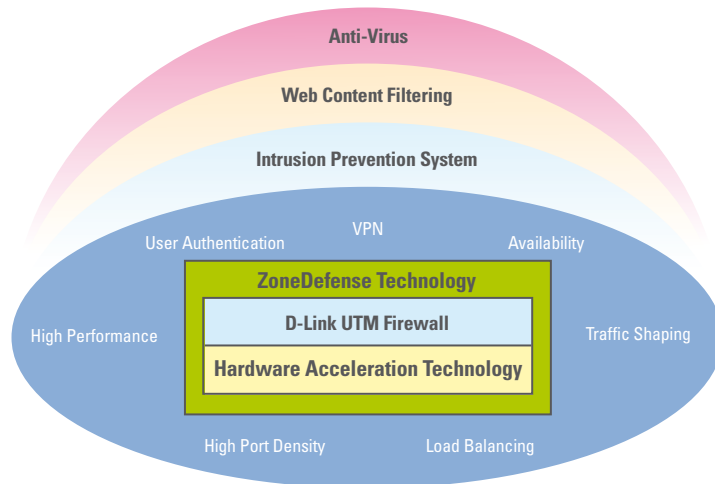
- **Up-to-date Protection**
  - » D-Link firewall AV defenses rely on Kaspersky Labs, the market leader in AV signature creation to provide the fastest response to the most dangerous viruses, Trojans, worms, and spyware programs.
- **Optimized Performance**
  - » Built-in extreme-performance AV acceleration engine that allows D-Link's UTM firewalls to perform with a much higher throughput than other anti-virus-capable UTM firewalls on the market.
- **Streaming-based Pattern Matching**
  - » Streaming-based scan engine inspection of all payloads and matches the signature packet-by-packet. File-based AV protection will never encounter file-size limitation since D-Link firewalls do not need to store whole files in memory for inspection purposes.
- **Fast Response Time**
  - » All anti-virus signatures are updated hourly and made available through D-Link update servers worldwide, and emergency signature releases protect against the latest, most virulent virus variations.
- **Comprehensive Anti-Virus Signature Database**
  - » Proactive signature database protection for each system against network worms, Trojans, and spyware with over 2,000 signatures covering all Wild List threats and thousands of well-known OS exploits and application vulnerabilities.
- **Complete Anti-Virus Signature Advisory**
  - » Complete anti-virus logs with issue dates, behavior and technical details enable MIS personnel to know about and then respond immediately to virus threats and infections.

D-Link NetDefend UTM firewalls implement stream-based virus scanning technology without first caching incoming files, thus increasing inspection performance and easing network bottleneck nightmares while enabling powerful virus defense capabilities.

D-Link's firewalls use virus signatures from the known, respected antivirus company Kaspersky Labs to provide users with prompt signature updates and reliable, accurate antivirus signatures. Using a built-in extreme-performance AV acceleration engine together with stream-based virus scanning technology, NetDefend UTM firewalls block viruses and malware before they ever reach the network's desktops or mobile devices. NetDefend firewalls create a safer network environment for companies of all sizes, from SMB to enterprises.



- Real-Time AntiVirus Gateway Inspection (AV)
- Professional Intrusion Prevention System (IPS)
- Automatic Signature Update
- Zero Day Attack Protection
- Web Surfing Management (WCF)
- Low Cost Licensing Using Per-Firewall Service Maintenance



<b>DFL-260-AV-12</b>	1 Year AV Subscription for DFL-260 UTM Firewall
<b>DFL-860-AV-12</b>	1 Year AV Subscription for DFL-860 UTM Firewall

### Features & Benefits

- **Global Index Servers**
  - » Global index servers maintain databases of millions of URLs and collect real-time website information about latest sites in order to keep data as current as possible.
  - » Multiple servers worldwide enhance performance and maximize service availability wherever a NetDefend firewall is installed.
- **Performance Optimized**
  - » Multiple index servers to enhance performance capacity and maximize service availability.
  - » Categories of recently visited websites are cached locally in each UTM firewall to maximize performance for subsequent requests.
- **Tight Integration with other D-Link Security Gateway Subsystems**
  - » Allows users to define highly-granular policies for allowing or disallowing where and when access to certain types of websites are permitted.
  - » Different policies can be applied to any combination of users, interfaces, and IP networks.
- **Static White and Black Lists**
  - » Define websites that will be explicitly allowed or blocked, independent of their classification.
  - » 32 default classification groups in NetDefend UTM firewalls to allow network administrators to control Internet usage.
- **Active Content Handling**
  - » Can strip potential malicious objects, such as Java applets, JavaScripts/ VBScripts, ActiveX objects and cookies, all of which are popular methods for hacker attacks.
- **Cost-Effective Web Content Filtering**
  - » Priced per firewall instead of per user, so enterprise-level organizations do not need to contemplate large TCO for licensing in order to manage the surfing privileges of all employees.
  - » One subscription can provide web surfing control for an entire organization.

NetDefend Web Content Filtering (WCF) service enforces access protection and management policy in terms of Internet resource allocation for your organization. It helps MIS monitor, manage, and control employee usage of and access to the Internet, and puts management back in control, enabling a more business-orientated and cost effective use of sometimes scarce Internet resources.

#### **Organizations gain significant cost savings through:**

- 1) A reduction in wasted staff time by reducing inappropriate web surfing.
- 2) Reduced Internet access costs and bandwidth savings by limiting and controlling non-business related uses, thus improving network response.
- 3) Reducing legal exposure to workplace conflicts and liabilities (e.g. sexual harassment cases or child pornography and the adverse publicity that such incidents can generate).
- 4) Reduced costs in recovering from attacks as much less inappropriate content will even be allowed to enter the network.



<b>DFL-260-WCF-12</b>	1 Year WCF Subscription for DFL-260 UTM Firewall
<b>DFL-860-WCF-12</b>	1 Year WCF Subscription for DFL-860 UTM Firewall

## Features & Benefits

- 10/100BASE-TX Ports Support 10/100Mbps Auto-Sensing Dual Speeds
- Use Inexpensive Copper Twisted-Pair Wires as Network Cable
- Support Full/Half Duplex Operation
- Support 802.3x Flow Control for Reliable Data Transfer
- Auto MDI/MDIX Plug-and-Play Connection
- 10/100/1000BASE-T Gigabit Uplinks to Servers and Network Backbone

These unmanaged Ethernet switches are Layer 2 switching devices that provide plug-and-play connection for homes and small businesses. They use the copper twisted-pair wires as the network cable, and support full/half duplex operation for 10/100Mbps speeds, full duplex operation for Gigabit uplink ports. These switches provide 802.3x flow control for reliable data transfer, and auto MDI/MDIX to eliminate the need for cross over cables and simplify installation.

### DES-1005D

#### 5-Port Ethernet Switch



- 5 10/100BASE-TX Ports
- 1Gbps Switch Capacity
- Powered through External Power Adapter

### DES-1016D

#### 16-Port Ethernet Switch



- 16 10/100BASE-TX Ports
- 3.2Gbps Switch Capacity
- Metal Casing
- Internal Power Supply
- Mounting Kit for 19-Inch Standard Equipment Racks

### DES-1008D

#### 8-Port Ethernet Switch



- 8 10/100BASE-TX Ports
- 1.6Gbps Switch Capacity
- Powered through External Power Adapter

### DES-1024D

#### 24-Port Ethernet Switch



- 24 10/100BASE-TX Ports
- 4.8Gbps Switch Capacity
- Metal Casing
- Internal Power Supply
- Mounting Kit for 19-Inch Standard Equipment Racks

### DES-1008F

#### 8-Port Ethernet Switch



- 8 10/100BASE-TX Ports
- 1 100BASE-FX Port (SC Connector) Supporting 2 km Multi-Mode Fiber
- 1.6Gbps Switch Capacity
- Powered through External Power Adapter

### DES-1016R+

#### 16-Port Ethernet Switch



- 16 10/100BASE-TX Ports
- 1 Open Slot for Optional Fiber Ports
- 3.2Gbps Switch Capacity
- 19-Inch Rack-Mount Metal Casing
- Internal Power Supply

## DES-1024R+

### 24-Port Ethernet Switch



- 24 10/100BASE-TX Ports
- 1 Open Slot for Optional Fiber Ports
- 4.8Gbps Switch Capacity
- 19-Inch Rack-Mount Metal Casing
- Internal Power Supply

## DES-1050G

### 48-Port Ethernet Switch



- 48 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Ports
- 13.6Gbps Switch Capacity
- 19-Inch Rack-Mount Metal Casing
- Internal Power Supply

## DES-102F

### 2-Port Fiber Ethernet Module



- Optional Module for DES-1016R+, DES-1016R+ Switches
- 2 100BASE-FX Ports (SC Connectors)
- Supports 2 km Multi-Mode Fiber
- 0.4Gbps Switch Capacity

## DES-1026G

### 24-Port Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 8.8Gbps Switch Capacity
- 19-Inch Rack-Mount Metal Casing
- Internal Power Supply

## DES-1048

### 48-Port Ethernet Switch



- 48 10/100BASE-TX Ports
- 9.6Gbps Switch Capacity
- 19-Inch Rack-Mount Metal Casing
- Internal Power Supply

## Features & Benefits

- 10/100/1000BASE-T Gigabit Ports Support 10/100/1000Mbps Auto-Sensing Speeds
- Decrease Energy Costs through Reduction of Power Consumption
- Automatically Power Down Ports that Have No Link
- Budget Power Output for Different Ethernet Cable Lengths
- Use Inexpensive Copper Twisted-Pair Wires as Network Cable
- Cost-Effective Alternative to Fiber Cable
- Support Full Duplex Operation
- Support 802.3x Flow Control for Reliable Data Transfer
- Auto MDI/MDIX Plug-and-Play Connection
- Comply with Regulations Regarding Use of Recyclable Packaging and Hazardous Materials

\* Comply with Regulations Requiring Use of Energy Efficient Power Adapters

These unmanaged Gigabit switches are Layer 2 switching devices that provide plug-and-play connection for homes and small businesses. Connecting to the existing low-cost Cat. 5 copper twisted-pair wires as the transmission media, these switches allow users to instantly upgrade desktop computers and servers to Gigabit capability without having to install new, expensive fiber cables. They support full duplex operation, provide 802.3x flow control for reliable data transfer, and auto MDI/MDIX to eliminate the need for cross over cables and simplify installation.



### DGS-1005D

#### 5-Port Gigabit Switch



- 5 10/100/1000BASE-T Ports
- 10Gbps Switch Capacity
- Powered through External Power Adapter

### DGS-1008D

#### 8-Port Gigabit Switch



- 10/100/1000BASE-T Ports
- 16Gbps Switch Capacity
- Powered through External Power Adapter

### DGS-1008TL

#### 8-Port Gigabit Switch



- 8 10/100/1000BASE-T Ports
- 16Gbps Switch Capacity
- Metal Casing
- Internal Power Supply
- Mounting Kit for Installation in 19-Inch Equipment Racks

### DGS-1016D

#### 16-Port Gigabit Switch



- 16 10/100/1000BASE-T Ports
- 32Gbps Switch Capacity
- Metal Casing
- Internal Power Supply
- Mounting Kit for Installation in 19-Inch Equipment Racks

### DGS-1024D

#### 24-Port Gigabit Switch



- 24 10/100/1000BASE-T Ports
- 48Gbps Switch Capacity
- Metal Casing
- Internal Power Supply
- Mounting Kit for Installation in 19-Inch Equipment Racks

### Features & Benefits

- Port Mirroring for Traffic Monitoring
- 802.1q VLAN, Port-based VLAN for Enhanced Security/network Performance
- Port-based QoS
- Web-based Configuration and SmartConsole
- MIB Support for SNMP Management
- CLI, Telnet Support

These light management switches present a cost-effective solution for small workgroups to set up a network with easy fine-tuning of performance and security. They provide functions similar to the Web-Smart switches and important for bandwidth-intensive applications such as priority queues and VLAN enable users to implement Quality of Service (QoS) and security without having to go through complex network management. In addition, these light management switches also provide Command Line Interfaces (CLI) for experienced IT personnel to do quick settings.

### DES-2108

*8-Port L2 Ethernet Switch*



- 8 10/100BASE-TX Ports
- 1.6Gbps Switch Capacity

## Features & Benefits

### • SmartConsole Utility

- » Easy access to the switch from a local PC.
- » No need to type in any IP address or subnet, all switches connected on the network are displayed on the screen for instant access.

### • Web-Based Users' Interface

- » Allows switch access from any location on the network or from a remote site, using a web-browser.
- » Allows extensive switch configuration setting, which can be backed up for duplication in other switches

### • Built-in MIB

- » Switches can be polled for information about their status. Traps of abnormal events can be sent out.
- » Switches can be integrated with other third-party devices for management in an SNMP environment.

### • Complete Layer 2 Managed Switch Functions

- » Include IGMP snooping, port mirroring, Spanning Tree and port trunks, important functions enhance performance and network resiliency.

### • VLAN Support

- » 802.1Q VLAN Tagging enhances network security and performance.

### • Quality of Service Support

- » 802.1p Priority Queues enables users to run streaming multimedia and VoIP applications.

### • Network Access Security

- » MAC address filters to screen access to network.
- » 802.1X port-based authentication allows the network to be configured with external RADIUS servers.

### • Safeguard Engine

- » Prevents ARP broadcast storm and protocol-based attacks.
- » ASIC is used to execute this prevention task to offload switch's CPU workload.

### • Power Saving

- » Automatically Power Down Ports that Have No Link.

The Web Smart switches are cost-effective LAN switches designed mainly to enhance the performance and security of small business networks. They provide many advanced features while maintaining the ease-of-use and basic cost characteristics of the unmanaged switches. Businesses with limited IT resources can deploy these switches to set up a manageable network without having to go through complex SNMP management.

The Web Smart switches can be configured from any network computer through an Internet browser, dispensing users of the need to set up consoles and connect console cables. All switches are automatically discovered and displayed on a network topology. From a network station, network administrators can monitor network status and statistics and receive traps of system events or port errors.

The Web Smart switches with 802.3af Power over Ethernet (PoE) carry electric power over the Ethernet cables. These switches are useful for surveillance and wireless networks, where cameras and access points typically need to be located at out-of-the-way locations, such as on the ceilings or rooftops, for maximum coverage. By transmitting remote power through the standard network cabling, these PoE switches provide a centralized power source for IP phones, cameras and wireless AP, eliminating the need for individual power cabling to these devices.



## DES-1228

### 24-Port Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP
- 2 10/100/1000BASE-T Ports
- 12.8Gbps Switch Capacity

## DES-1228P

### 24-Port PoE Ethernet Switch



- 24 10/100BASE-TX Ports (All Ports with 802.3af PoE)
- 2 Combo 10/100/1000BASE-T/SFP
- 2 10/100/1000BASE-T Ports
- 12.8Gbps Switch Capacity



## DES-1250G

### 48-Port Ethernet Switch



- 48 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 13.6Gbps Switch Capacity

## DGS-1248T

### 48-Port Gigabit Switch



- 48 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 96Gbps Switch Capacity

## DES-1252

### 48-Port Ethernet Switch



- 48 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP
- 2 10/100/1000BASE-T Ports
- 17.6Gbps Switch Capacity

## DGS-1216T

### 16-Port Gigabit Switch



- 16 10/100/1000BASE-T Ports
- 2 Combo SFP Slots
- 32Gbps Switch Capacity

## DGS-1224T

### 24-Port Gigabit Switch



- 24 10/100/1000BASE-T Ports
- 2 Combo SFP Slots
- 48Gbps Switch Capacity

## Features & Benefits

### • Affordable Enterprise Features

- » Include IP-MAC-port binding user access screening, traffic segmentation, 802.1Q VLANs, 802.1X port-based/MAC-based access control, external RADIUS server authentication support.
- » 802.1D Spanning Tree/802.1w Rapid Spanning Tree, STP loopback detection and broadcast storm control for network resilience.
- » 802.3ad Link Aggregation port trunks for switch cascading and server link.

### • Complete Set of Access Control List (ACL)

(for DES-3028, 3028P, 3052, 3052P only)

- » Up to 256 profiles, 256 rules for individual switch ports or range of ports.
- » ACL rules can be based on switch port, VLAN ID, 802.1p Priority Queues, MAC address, IPv4 address, DSCP, protocol type, TCP/UDP port, user-defined packet content and time-based ACL.

### • CPU Interface Filtering

- » Filters out vicious packets in internal network and prevents them from reaching and overwhelming switch's CPU.

### • Quality of Service

- » Multi-level packet classification based on 802.1p Priority Queues, TOS, DSCP and MAC addresses.

### • Bandwidth Control

- » Fine granularity to define limits down to 64Kbps segments for each port.
- » When applied to control of broadcast storms infected with virus, can limit level of damage a virus attack can do to network.
- » IGMP snooping to control multicast transmission.
- » Port mirroring to facilitate diagnostics.

### • DHCP Auto-Configuration

- » Network administrators can pre-set configurations and save them in TFTP server.
- » Individual switches can boot their IP from server and load in pre-set configurations.

### • Single IP Management

- » Multiple switch units can be managed as a single object (a virtual stack), all units identified by a single IP address.
- » Network administrators can see Tree View of members of the virtual stack and network topology showing locations of the units and their link information.

These managed Layer 2 Ethernet switches provide an entry-level SNMP management solution for businesses. Workgroups looking for an advanced yet affordable solution can deploy these switches to bring managed Ethernet connection to their desktops.

These switches include more advanced software features than similar devices of the same class. These features allow administrators to set up a secure network and fine-tune the workgroup performance. For inter-workgroup connection, the switches provide fiber uplinks to connect together groups of users in, for example, different classrooms or departments spread across on a campus or between buildings. Supporting D-Link's Single IP Management, these switches can be easily configured with any switches supporting D-Link's Single IP Management, including the xStack core switches, for integration with a more comprehensive network structured with backbone and centralized high-speed servers.

## DES-3010G

### 8-Port L2 Ethernet Switch



- 8 10/100BASE-TX Ports
- 1 10/100/1000BASE-T Gigabit Port
- 1 SFP Slot for Fiber Gigabit
- 5.6Gbps Switch Capacity

## DES-3010F

### 8-Port L2 Ethernet Switch



- 8 10/100BASE-TX Ports
- 1 100BASE-FX Port (SC Connector, 2 km Multi-Mode Fiber Transmission Distance)
- 1 10/100/1000BASE-T Gigabit Port
- 3.8Gbps Switch Capacity

## DES-3010FL

### 8-Port L2 Ethernet Switch



- 8 10/100BASE-TX Ports
- 1 100BASE-FX Port (SC Connector, 15 km Single-Mode Fiber Transmission Distance)
- 1 10/100/1000BASE-T Gigabit Port
- 3.8Gbps Switch Capacity

## DES-3016

### 16-Port L2 Ethernet Switch



- 16 10/100BASE-TX Ports
- 3.2Gbps Switch Capacity

## DES-3018

### 16-Port L2 Ethernet Switch



- 16 10/100BASE-TX Ports
- 2 Open Slots for Optional Fiber Ethernet or Gigabit Uplinks
- 7.2Gbps Switch Capacity

## DES-3052

### 48-Port L2 Ethernet Switch



- 48 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP
- 2 10/100/1000BASE-T Gigabit Ports
- 17.6Gbps Switch Capacity

## DEM-301T

### 1-Port 10/100/1000Mbps Module



- 1 10/100/1000BASE-T Gigabit Port
- For use with DES-3018 & DES-3026 Switches

## DES-3026

### 24-Port L2 Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 Open Slots for Optional Fiber Ethernet or Gigabit Uplinks
- 8.8Gbps Switch Capacity

## DES-3052P

### 48-Port L2 PoE Ethernet Switch



- 48 802.3af PoE 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP
- 2 10/100/1000BASE-T Gigabit Ports
- 17.6Gbps Switch Capacity

## DEM-301G

### 1-Slot SFP Module



- 1 SFP Slot
- For use with DES-3018 & DES-3026 Switches

## DES-3028

### 24-Port L2 Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP
- 2 10/100/1000BASE-T Gigabit Ports
- 12.8Gbps Switch Capacity

## DEM-201F

### 1-Port 100BASE-FX Module



- 1 100BASE-FX Port (SC Connector)
- 2 km Multi-Mode Fiber Transmission Distance
- For use with DES-3018 & DES-3026 Switches

## DES-3028P

### 24-Port L2 PoE Ethernet Switch



- 24 802.3af PoE 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP
- 2 10/100/1000BASE-T Gigabit Ports
- 12.8Gbps Switch Capacity

## DEM-201FL

### 1-Port 100BASE-FX Module



- 1 100BASE-FX Port (SC Connector)
- 15 km Single-Mode Fiber Transmission Distance
- For use with DES-3018 & DES-3026 Switches

## Features & Benefits

### • Affordable Enterprise Features

- » Include 802.1Q VLANs, 802.1X port-based access control, and external RADIUS server authentication support.
- » 802.1D Spanning Tree/802.1w Rapid Spanning Tree/802.1s Multiple Spanning Tree and broadcast/Multicast/Unicast storm control for network resilience.
- » 802.3ad Link Aggregation port trunks for switch cascading and server link.
- » IGMP snooping to control multicast transmission.
- » Port mirroring to facilitate diagnostics.

### • Quality of Service

- » Packet prioritization based on 802.1p Priority Queues for smooth traffic for voice and multimedia applications.
- » Bandwidth control

### • Redundant Power Supply Support

- » Switch can be connected to optional external power supply for redundant power backup.

These stand-alone SNMP managed Gigabit switches are powerful and versatile switches that provide Gigabit connection to the departmental desktops. These switches eliminate network bottlenecks and give network administrators the capability to fine-tune performance and set up security. They support standards based network management protocols (SNMP/RMON/ BOOTP1/Telnet/Web) and can be easily integrated with most third-party network management products.

These switches provide advanced features to facilitate the deployment of applications across a departmental network, such as VoIP, streaming media, and multicast content delivery (IP video, software deployment etc). With high Gigabit port densities and multiple SFP support, these switches can easily adapt to changes in users' media requirements without the need to perform expensive upgrades.

### DGS-3024

#### 24-Port L2 Gigabit Switch



- 24 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 48Gbps Switch Capacity

### DGS-3048

#### 48-Port L2 Gigabit Switch



- 48 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 96Gbps Switch Capacity

## Features & Benefits

- **Fault Tolerant Ring Stacking**
  - » Any broken link between two units in a stack will not affect inter-switch traffic as the traffic is redirected toward the opposite direction.
- **High-Speed Physical Stacking**
  - » Two stacking ports on the back of each switch, each port providing up to 5Gbps (10Gbps in full-duplex mode) data transfer rate.
  - » Shared 20Gbps Ring stacking topology, ample bandwidth for intra-stack traffic traveling through the stacking cables.
- **Scalable Expansion**
  - » Up to 6 switch units per stack, up to 288 Gigabit ports per stack
  - » Switch units can be gradually added as network need grows.
  - » No interruption to network service or current configuration as switch units are added to the stack.
- **Affordable Enterprise Features**
  - » Include private VLAN, 802.1Q VLAN, GVRP, 802.1X port-based/MAC-based access control.
  - » 802.1D Spanning Tree/802.1w Rapid Spanning Tree/802.1s Multiple Spanning Tree, loopback detection and broadcast storm control for network resilience.
  - » 802.3ad Link Aggregation port trunks for stack cascading and server link.
- **Complete Set of Access Control List (ACL)**
  - » Up to 15 profiles, max 240 rules shared by all profiles.
  - » ACL rules can be based on switch port, VLAN ID, 802.1p Priority Queues, MAC address, IP address, DSCP, protocol type, TCP/UDP port and time-based ACL.
- **Quality of Service**
  - » Multi-level packet classification based on 802.1p Priority Queues, TOS, DSCP, IP/MAC addresses and TCP/UDP port number.
- **Bandwidth Control**
  - » Fine granularity to define limits down to 64Kbps segments for each port.
  - » Port and Flow-based bandwidth control.
- **Multicasting**
  - » IGMP and MLD snooping to control multicast transmission.
  - » Port mirroring to facilitate diagnostics.
- **Safeguard Engine**
  - » Prevents ARP broadcast storm and protocol-based worm/virus attacks.
  - » ASIC is used to execute this prevention task to offload switch's CPU workload.
- **Pre-set Configuration File**
  - » Administrators can pre-set configurations and save them as configuration files in TFTP server for download to switches.
- **DHCP Auto-Configuration**
  - » Administrators can pre-set configuration in DHCP server for application in switches when they fetch their IP from this server.

These managed Layer 2 Gigabit switches provide an entry-level SNMP management solution for businesses. Workgroups looking for a flexible, advanced yet affordable solution can deploy these switches to bring managed Gigabit connection to their desktops.

These switches provide high Gigabit port densities, SFP fiber options and physical stacking. The stacking feature offers scalable expansion: switches can be stacked up to 6 units or 288 Gigabit ports per stack on a per-need basis to accommodate network growth. The two stacking ports on the back of each switch provide 5Gbps per-port bandwidth (10Gbps in full-duplex mode) for physical Ring stacking in a fault-tolerant topology. Expansion beyond a single stack is possible using Gigabit port trunks between stacks, or from stack to network backbone and server paths.

These switches include more advanced software features than similar devices of the same class, allowing administrators to set up a secure network and fine-tune the workgroup performance. These features include a complete set of Access Control List, multi-level packet classification for Quality of Service and bandwidth management.

### DGS-3100-24

#### 24-Port L2 Gigabit Switch



- 24 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Stacking Ports
- 68Gbps Switch Capacity

### DGS-3100-24P

#### 24-Port L2 PoE Gigabit Switch



- 24 802.3af PoE 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Stacking Ports
- 68Gbps Switch Capacity

### DGS-3100-24TG

#### 24-Port L2 Gigabit Switch



- 8 10/100/1000BASE-T Ports
- 16 SFP Slots
- 2 Stacking Ports
- 68Gbps Switch Capacity

### DGS-3100-48

#### 48-Port L2 Gigabit Switch



- 48 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Stacking Ports
- 116Gbps Switch Capacity

### DGS-3100-48P

#### 48-Port L2 PoE Gigabit Switch



- 48 802.3af PoE 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Stacking Ports
- 116Gbps Switch Capacity

## Features & Benefits

- **Security Switch for Enterprises and Remote Branch Offices**
  - » Integrated malicious traffic and performance degradation prevention functions.
  - » Quiet fan less ventilation suitable for desktop installation. (DGS-3200-10)
- **Full L2 Features**
  - » Up to 4K of VLAN groups.
  - » Jumbo Frame support up to 10,240 bytes.
  - » MLD snooping v1/v2.
  - » Loopback detection ensures resilience while preventing network performance from degradation.
- **Comprehensive Network Security**
  - » 802.1x authentication, Web-Based Access Control (WAC), MAC-Based Access Control (MAC), IP-MAC-Port Binding.
  - » D-Link Safeguard engine prevents ARP broadcast storm and protocol-based attacks.
  - » SSH/SSL.
  - » Microsoft NAP and D-Link ZoneDefense support.
- **Quality of Service**
  - » 8 priority queues supporting 802.1p and multi-layer CoS.
- **Traffic Monitoring/Bandwidth Control**
  - » Traffic segmentation, per-flow bandwidth control.
  - » Broadcast storm control.
  - » Port Mirroring.
- **IPv6 Support**
  - » Can interoperate with IPv6 implementations.

The Security Gigabit Switches offer a new generation of intelligence and defense displayed through the delivery of its high performance, flexible expansion, and robust security. They execute firm network security and come with ACL functionalities, which secure the internal IT network against external viruses from invading the LAN. Built on fan-less technology, these compact switches produce and emit less heat and noise than the standard switches, and are ideal for office environments or circumstances that require undisturbed silence.

These switches offer a complete list of endpoint security features to add confidence and assurance towards your network. They come with user-based identity control by implementing host-based 802.1x authentication/authorization, along with clientless Web-based Access Control (WAC) and MAC-based Access Control (MAC) for easy deployment. ACL user-defined functionality secures the internal IT network against viruses and worms from invading the LAN to provide better security. IP-MAC-Port Binding prevents ARP spoofing and man-in-middle attacks by disabling users from manually configuring their own IP or MAC address, and allowing administrators to assure that the IP information on the Syslog server or firewall log is correct. Other security features like port security and traffic segmentation provide granular control to business environments, allowing administrators to enhance network security.

D-Link's joint security provides admission control and real-time defense through Microsoft's NAP (Network Access Protection) and D-Link's ZoneDefense respectively. D-Link's built-in ZoneDefense technology allows businesses to integrate their switch with D-Link's NetDefend firewall to implement full coverage and a proactive security architecture.

### DGS-3200-10

*10-Port L2 Security Gigabit Switch*



- 8 10/100/1000BASE-T Ports
- 2 Combo 10/100/1000BASE-T/SFP Ports
- 20Gbps Switch Capacity

### DGS-3200-16

*16-Port L2 Security Gigabit Switch*



- 14 10/100/1000BASE-T Ports
- 2 Combo 10/100/1000BASE-T/SFP Ports
- 32Gbps Switch Capacity



## Features & Benefits

- **Full Layer 2 Functions**
  - » 802.1Q VLAN, LACP Port Trunk, STP/ RSTP/MSTP.
- **Enhanced Layer 2+ Functions (DES-3528/52 & DES-3800 Series)**
  - » Layer 3 Routing: up to 128 Static Routes (IPv4/v6).
  - » IPv6 tunneling.
- **Layer 3 Protocol Support**
  - » RIP, OSPF, VRRP (DES-3800 series only)
- **Multicast Support**
  - » IGMP Snooping.
  - » IGMP v3, DVMRP, PIM-DM/SM (DES-3800 series).
  - » MLD Snooping.
- **Quality of Service (QoS)**
  - » 802.1p Priority Queues, L2/L3/L4 Multi-Layer CoS.
- **Traffic Management**
  - » Traffic Segmentation, Granular Bandwidth Control, Broadcast Storm Control.
  - » Jumbo Frame.
- **Security**
  - » Port Security, L2/L3/L4 ACL, 802.1x Port/MAC-based Access Control, IP-MAC-Port Binding, RADIUS/TACACS+ Authentication, SSH, SSL, 802.1x Guest VLAN.
  - » MAC-based/Web-based Access Control (MAC/WAC).
  - » Voice VLAN. (DES-3528/52 Series)
  - » Double VLAN (DES-3528/52 & DES-3800 series).
- **Safeguard Engine**
  - » Prevents ARP broadcast storm and protocol-based attacks.
  - » ASIC is used to execute this prevention task to offload switch's CPU workload.
- **ZoneDefense**
  - » Operates with D-Link NetDefend firewalls, automatically quarantines infected workstations and prevent them from flooding the network with malicious traffic.
- **Administration**
  - » Single IP Management, SNMP v1/v2c/v3, Web Management, Port Mirroring, CLI, Telnet, TFTP, Dual Image, BOOTP/ DHCP relay, DHCP Relay Option 82, DHCP Auto Configuration, System log.
- **Physical Ring Stacking**
  - » Cross-Stack Trunking/Mirroring (DES-3528/52 Series).
- **Redundant Power Supply Support**
  - » Optional external power supply for redundant power backup.
- **D-View SNMP Management**
  - » Management software module provided for management under D-View.

These Ethernet switches comprise the departmental access layer that can be seamlessly integrated with the core of a network. Ideal for deployment at the network edge closer to workstations for maximum scalability, these switches provide desktop users secure and smooth access to a network and its servers while allowing them to be easily integrated with other departmental workgroups via the core network backbone.

The access layer switches deliver performance, flexible expansion, robust security, and multi-layer Quality of Service (QoS). Supporting D-Link's Single IP Management, these switches can be easily stacked and configured with any switches supporting D-Link's Single IP Management, including the xStack core switches, to form part of a multi-level network structured with backbone and centralized high-speed servers. Without any stacking cable, cable distance barrier and physical stacking method limitations, an access layer stack can comprise units that are located anywhere on the same network domain, eliminating the possibility of any single point of failure.

The access layer switches can be Layer 2 or Layer 3 switches. The Layer 2 switches provide packet switching for departmental users while leaving higher level packet routing to the core switches. The Layer 3 switches blend L2 packet switching with dynamic L3 IP routing to relieve the core switches of some workload and remove unnecessary traffic from the network backbone and the server paths.



### DES-3526

#### 24-Port L2 Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 8.8Gbps Switch Capacity

### DES-3526DC

#### 24-Port L2 Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 8.8Gbps Switch Capacity
- Internal DC Power Supply

### DES-3528

#### 24-Port L2+ Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 2 Stacking Ports \*
- 12.8Gbps Switch Capacity

### DES-3528DC

#### 24-Port L2+ Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 2 Stacking Ports \*
- 12.8Gbps Switch Capacity
- Internal DC Power Supply



### DES-3528P

#### 24-Port L2+ PoE Ethernet Switch



- 24 802.3af PoE 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 2 Stacking Ports \*
- 12.8Gbps Switch Capacity

### DES-3552

#### 48-Port L2+ Ethernet Switch



- 48 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 2 Stacking Ports \*
- 17.6Gbps Switch Capacity

### DES-3828DC

#### 24-Port L3 Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 12.8Gbps Switch Capacity
- Internal DC Power Supply

### DES-3528G

#### 24-Port L2+ Ethernet Switch



- 24 10/100BASE-TX Ports
- 4 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- SFP also Supports 100BASE-FX Ethernet Fiber
- 2 Stacking Ports \*
- 12.8Gbps Switch Capacity

### DES-3552P

#### 48-Port L2+ PoE Ethernet Switch



- 48 802.3af PoE 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 2 Stacking Ports \*
- 17.6Gbps Switch Capacity

### DES-3828P

#### 24-Port L3 PoE Ethernet Switch



- 24 802.3af PoE 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 12.8Gbps Switch Capacity

### DES-3550

#### 48-Port L2 Ethernet Switch



- 48 10/100BASE-TX Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 13.6Gbps Switch Capacity

### DES-3828

#### 24-Port L3 Ethernet Switch



- 24 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 12.8Gbps Switch Capacity

### DES-3852

#### 48-Port L3 Ethernet Switch



- 48 10/100BASE-TX Ports
- 2 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T/SFP Gigabit Uplinks
- 17.6Gbps Switch Capacity

\* Stacking ports can also be used as 10/100/1000BASE-T Gigabit uplinks; total Gigabit uplinks remain as 4.

## Features & Benefits

- **Fault Tolerant Ring Stacking**
  - » Any broken link between two units in a stack will not affect inter-switch traffic, as intra-stack traffic is redirected toward the opposite direction.
- **High-Speed Physical Stacking**
  - » Open slots for 10-Gigabit modules to use as stacking ports. Each stacking port provides 20Gbps full-duplex operation.
  - » Shared 40Gbps full-duplex per stack, ample bandwidth for intra-stack traffic.
- **Scalable Expansion**
  - » Up to 12 units, 576 Gigabit ports per stack.
  - » Switch units and optional 10-Gigabit modules can be gradually added as network need grows.
- **Trunking & Mirroring Across Stack**
  - » Allows trunking and mirroring to span multiple switch units in the stack.
- **10-Gigabit Uplinks**
  - » Open slots for optional 10-Gigabit modules for uplinks to network servers and backbone.
- **Full Layer 2 Functions**
  - » 802.1Q VLAN, Double VLAN, LACP Port Trunking, STP/RSTP/MSTP.
- **Enhanced Layer 2+ Functions**
  - » Layer 3 Routing: up to 128 Static Routes (IPv4/v6).
  - » IPv6 tunneling.
- **Multicast Support**
  - » IGMP Snooping, MLD Snooping.
- **Quality of Service (QoS)**
  - » 802.1p Priority Queues (8 queues), L2/L3/L4 Multi-Layer CoS.
- **Traffic Management**
  - » Traffic Segmentation, Bandwidth Control Down to 64Kbps, Broadcast Storm Control, Jumbo Frame.
- **Security**
  - » IP-MAC-Port Binding Port Security, L2/L3/L4 ACL, RADIUS/TACACS+ Authentication, SSH, SSL, 802.1X Port/MAC-based access control, MAC-based/Web-based Access Control (MAC/WAC), CPU Interface Filtering.
- **Safeguard Engine**
  - » Prevents ARP broadcast storm and protocol-based attacks.
  - » ASIC is used to execute this prevention task to offload switch's CPU workload.

These Gigabit switches comprise the enhanced Layer 2+ access layer stack designed for departmental Gigabit connection. Ideal for deployment at the network edge closer to workstations for maximum scalability, these switches can be seamlessly integrated with Layer 3 core switches through the optional 10-Gigabit uplinks to form part of a multi-layer network structured with high-speed backbone and centralized servers.

Optional 10-Gigabit modules can be installed in the open slots to create a physical stack. Up to 12 units can be stacked together to create 576 Gigabit ports. Users can install one or two 10-Gigabit ports as stacking interfaces, depending on whether the linear or fault-tolerant Ring stacking is implemented. Each stacking interface provides 20Gbps full duplex transmission on the cost-effective coaxial cable. Modules with single 10-Gigabit XFP can also be installed in any of the open slots for uplink to servers or a fiber backbone.

Alternatively, an enhanced Layer 2+ access layer Gigabit switch can operate as a stand-alone device. Embedded with Single IP Management capability, a stand-alone switch can form part of a virtual stack, where intra-stack traffic flows through the usual network wires, doing away with the costly stacking cables. Without stacking cables, cable distance barriers and physical stacking limitations, a virtual stack can comprise units that are located anywhere on the network to minimize the impact of any single point of failure.

# X S T A C K



### ● ZoneDefense

- » Operates with D-Link NetDefend firewalls, automatically quarantines infected workstations and prevent them from flooding the network with malicious traffic.

### ● IPv6 Ready Logo Phase 1

- » Core functions such as IPv6 Specification, Neighbor Discovery, Address Auto-configuration and Internet Control Message Protocol (ICMPv6) are included.
- » Can interoperate with other IPv6 implementations.

### ● Administration

- » Single IP Management, SNMP v1/v2c/v3, Web Management, Port Mirroring, CLI, Telnet, TFTP, Dual Image, BOOTP/DHCP relay, DHCP Relay Option 82, DHCP Auto Configuration, System log.

### ● Redundant Power Supply Support

- » Optional external power supply for redundant power backup.

### ● D-View SNMP Management

- » Management software module provided for management under D-View.

## DGS-3426

### 24-Port L2+ Gigabit Switch



- 24 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Open Slots for 10-Gigabit Uplink Modules
- 88Gbps Switching Capacity

## DGS-3426P

### 24-Port L2+ Gigabit Switch



- 24 802.3af PoE 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Open Slots for 10-Gigabit Uplink Modules
- 88Gbps Switching Capacity

### DGS-3427

#### 24-Port L2+ Gigabit Switch



- 24 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 3 Open Slots for 10-Gigabit Uplink Modules
- 108Gbps Switching Capacity

### DEM-410CX

#### 1-Port 10-Gigabit Module



- 1 CX4 Port
- For Use with DGS-3426, DGS-3426P, DGS-3427 & DGS-3450 Switches

### DGS-3450

#### 48-Port L2+ Gigabit Switch



- 48 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Open Slots for 10-Gigabit Uplink Modules
- 136Gbps Switching Capacity

### DEM-CB300CX

#### Twin-Axial Copper Cable



- 3 Meters' Cable Length
- For Use with DEM-410CX Module

### DEM-410X

#### 1-Port 10-Gigabit Module



- 1 XFP Slot
- For Use with DGS-3426, DGS-3426P, DGS-3427 & DGS-3450 Switches

## Features & Benefits

- **Fault Tolerant Ring Stacking**
  - » No interruption to service of entire stack if any link between two units is broken, as stack traffic is redirected toward opposite direction.
- **High-Speed Physical Stacking**
  - » Each stacking port provides 20Gbps full-duplex operation.
  - » Shared 40Gbps full-duplex band width per stack.
- **Scalable Expansion**
  - » Up to 12 units, 576 Gigabit ports per stack.
- **Trunking & Mirroring Across Stack**
  - » Allows trunking and mirroring to span multiple switch units in the stack.
- **10-Gigabit Uplinks**
  - » Open slots for optional 10-Gigabit modules for uplinks to network servers and backbone.
- **Complete Layer 2 Functions**
  - » 802.1Q VLAN, Double VLAN, LACP Trunking, STP/RSTP/MSTP.
- **Layer 3 Functions**
  - » RIP v1/v2/ng, OSPF, VRRP.
  - » Up to 256 IPv4 Static Routes, 128 IPv6 Static Routes.
- **Multicast Support**
  - » IGMP Snooping, MLD Snooping, IGMP v1/v2/v3, DVMRP, PIM-DM/SM.
- **Quality of Service**
  - » 802.1p, 8 priority queues, L2/L3/L4 Multi-Layer CoS.
- **Traffic Management**
  - » Traffic Segmentation, Bandwidth Control Down to 64Kbps, Broadcast Storm Control, Jumbo Frame.
- **Security**
  - » IP-MAC-Port Binding Port Security, L2/L3/L4 ACL, RADIUS/TACACS+ Authentication, SSH/SSL, 802.1X Port/MAC-based access control, MAC-based/Web-based Access Control (MAC/WAC), CPU Interface Filtering.
- **Safeguard Engine**
  - » Prevents ARP broadcast storm and protocol-based attacks.
  - » ASIC is used to execute this prevention task to offload switch's CPU workload.
- **ZoneDefense**
  - » Operates with D-Link NetDefend firewalls, automatically quarantines infected workstations and prevent them from flooding the network with malicious traffic.

These switches comprise the network core devices that combine performance with scalable flexibility and versatile management. They offer physical Ring stacking, fault tolerance, optional 10-Gigabit uplinks, Layer 3 packet routing and robust security/QoS -- all the features are typically found in the more expensive chassis-based solutions.

Optional 10-Gigabit modules can be installed in the open slots to create a physical stack. Up to 12 units can be stacked together to create 576 Gigabit ports. Users can install one or two 10-Gigabit ports as stacking interfaces, depending on whether the linear or fault-tolerant Ring stacking is implemented. Each stacking interface provides 20Gbps full duplex transmission on the cost-effective coaxial cable. Modules with single 10-Gigabit XFP can also be installed in any of the open slots for uplink to servers or a fiber backbone.

Alternatively, a core Gigabit switch can operate as a stand-alone device. Embedded with Single IP Management capability, a stand-alone switch can form part of a virtual stack, where intra-stack traffic flows through the usual network wires, doing away with the costly stacking cables. Without stacking cables, cable distance barriers and physical stacking limitations, a virtual stack can comprise units that are located anywhere on the network to minimize the impact of any single point of failure.

These switches implement the most advanced set of multi-layer L2/L3/L4 features in the xStack series to ensure that critical network services like VoIP, ERP, Intranet and video conference are securely and well served. Powerful management tools including SNMP, RMON, sFlow and web-based interfaces allow administrators to perform most management and configuration tasks effectively and with ease.



- **IPv6 Ready Logo Phase 1**
  - » Core functions such as IPv6 Specification, Neighbor Discovery, Address Auto-configuration and Internet Control Message Protocol (ICMPv6) are included.
  - » Can interoperate with other IPv6 implementations.
- **Administration**
  - » Single IP Management, SNMP v1/v2c/v3, sFlow, Web Management, Port Mirroring, CLI, Telnet, TFTP, Flash File System, BOOTP/DHCP relay, DHCP Auto-Configuration, System Log.
- **Redundant Power Supply Support**
  - » Optional external power supply for redundant power backup.
- **D-View SNMP Management**
  - » Management software module provided for management under D-View.

## DGS-3612

*12-Port L3 Gigabit Switch*



- 12 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 24Gbps Switching Capacity

### DGS-3612G

#### 12-Port L3 Gigabit Switch



- 12 SFP Slots
- 4 Combo 10/100/1000BASE-T Ports
- 24Gbps Switching Capacity

### DGS-3650

#### 48-Port L3 Gigabit Switch



- 48 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 2 Open Slots for 10-Gigabit Uplink Modules
- 136Gbps Switching Capacity

### DEM-CB300CX

#### Twin-Axial Copper Cable



- 3 Meters' Cable Length
- For use with DEM-410CX Module

### DGS-3627

#### 24-Port L3 Gigabit Switch



- 24 10/100/1000BASE-T Ports
- 4 Combo SFP Slots
- 3 Open Slots for 10-Gigabit Uplink Modules
- 108Gbps Switching Capacity

### DEM-410X

#### 1-Port 10-Gigabit Module



- 1 XFP Slot
- For use with DGS-3627, DGS-3627G, DGS-3650 Switches

### DGS-3627G

#### 24-Port L3 Gigabit Switch



- 24 SFP Slots
- 4 Combo 10/100/1000BASE-T Ports
- 3 Open Slots for 10-Gigabit Uplink Modules
- 108Gbps Switching Capacity

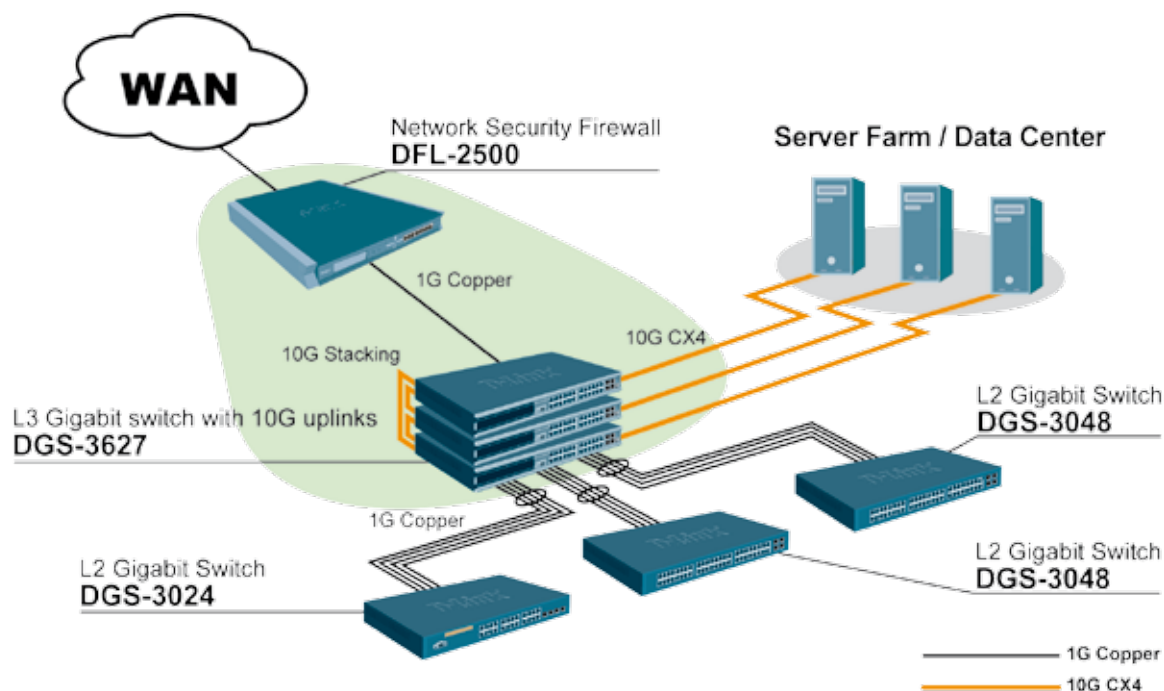
### DEM-410CX

#### 1-Port 10-Gigabit Module

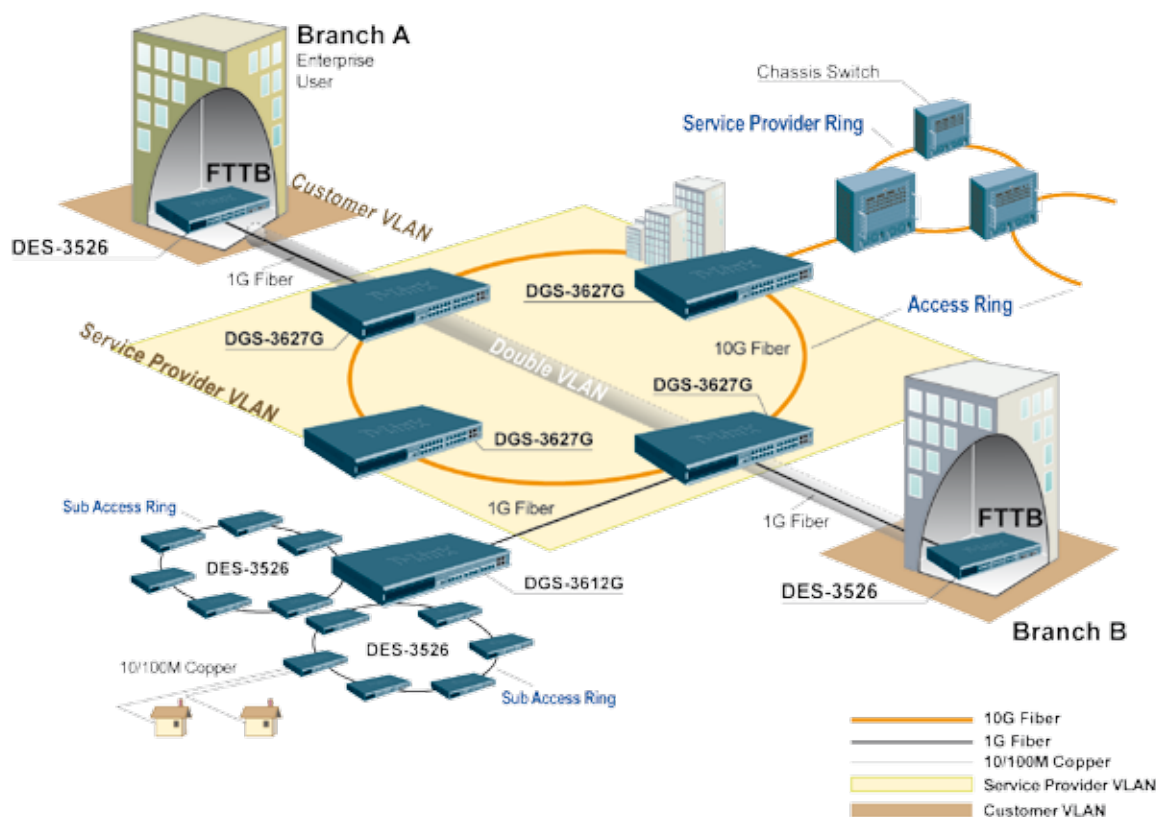


- 1 CX4 Port
- For use with DGS-3627, DGS-3627G, DGS-3650 Switches

## ► Deploying xStack Switches in an Enterprise Network ◀



## ► Deploying xStack Switches in a Carrier Network ◀





## Features & Benefits

- **9-Slot Chassis**
  - » 1 CPU & Management module.
  - » 8 card Slots for user-selectable port modules.
- **High Port Density**
  - » Users can select port modules to install maximum: 16 10-Gigabit slots for fiber SR, LR transceivers; 96 RJ-45, SX or LX Gigabit ports; 96 100BASE-FX fiber Ethernet ports; or 128 10/100Mbps Ethernet ports.
- **Layer 2 Functions**
  - » 802.1Q VLAN, LACP Trunking, STP/RSTP/ MSTP.
- **Layer 3 Routing/Redundancy**
  - » RIP, OSPF, VRRP.
- **Multicast Support**
  - » IGMP Snooping, IGMP v3, DVMRP, PIM-DM/ SM.
- **Quality of Service**
  - » 802.1p Priority Queues (8 queues), L2/L3/L4 Multi-Layer CoS.
- **Traffic Management**
  - » Traffic Segmentation, Bandwidth Control down to 1Mbps, Broadcast Storm Control, Jumbo Frame.
- **Security**
  - » Port Security, L2/L3/L4 ACL, RADIUS/ TACACS+ Authentication, SSH/SSL, 802.1X Port/MAC-based access control, CPU Interface Filtering..
- **Safeguard Engine**
  - » Prevents ARP broadcast storm.
  - » ASIC is used to execute this prevention task to offload switch's CPU workload.
- **Administration**
  - » Single IP Management, SNMP v1/v2c/v3, Web Management, Port Mirroring, CLI, Telnet, TFTP, Dual Image, BOOTP/DHCP relay, System Log
- **Redundant Power Supply Support**
  - » Optional power supply installable in chassis for redundant power backup.
- **D-View SNMP Management**
  - » Management software module provided for management under D-View.

These chassis-based switches provide configuration flexibility and performance necessary for deployment of a cost-effective enterprise, backbone and campus network. They provide a high density of Gigabit ports, 10-Gigabit support, high switch fabric capacity, fault tolerance, Quality of Service (QoS), and network security critical for enterprise applications.

Users can configure each chassis with up to 96 Gigabit ports, 16 10-Gigabit ports, 192 10/100Mbps Ethernet ports, 96 100Base-FX fiber Ethernet ports, or a combination of these. With 8 line card slots and a wide range of selectable port types, users can easily add and change modules to suit their requirements.

Using standards-based routing, the chassis provides instant support for Windows, Unix and Internet environments. Built-in wire-speed non-blocking switch fabric provides hardware-based packet filtering/forwarding.

The switch implements an advanced set of multi-layer L2/L3/L4 features to ensure that critical network services like VoIP, ERP, Intranet and video conference are securely and well served. Powerful management tools including SNMP, RMON and web-based interfaces allow administrators to perform most management and configuration tasks effectively and with ease.



### DES-6500

#### 9-Slot L3 Chassis Switch



- CPU/Management Module Installed in Slot 1
- 8 Open Slots for Port Modules
- 160Gbps Switch Capacity
- 2 Slots for 2 DES-6511 Redundant Power Supply Units (1 DES-6511 Power Supply Unit Pre-Installed in Chassis)
- Up to 96 Gigabit Ports
- Up to 16 10-Gigabit Ports
- Up to 192 10/100BASE-TX Ports
- Up to 96 100BASE-FX Ports

### DES-6504

#### 12-Port Fiber Ethernet Module



- 12 100BASE-FX Ports (SFF (LC) Connectors)
- Supports up to 2 km Multi-Mode Fiber Cable Length

### DES-6508

#### 16-Port 10/100Mbps Module



- 16 10/100BASE-TX Ports (RJ-45 Connectors)



## DES-6510

### 24-Port 10/100Mbps Module



- 24 10/100BASE-TX Ports (RJ-21 Connectors)

## DES-6506

### 24-Port Patch Panel Module



- Patch Panel for 24 RJ-45 Ports
- For Use with DES-6510 Port Module

## DES-6505

### 8-Port Fiber Gigabit Module



- 8 1000BASE-SX Gigabit Ports (SC Connector)
- Supports up to 550 m Multi-Mode Fiber Cable Length

## DES-6507

### 12-Port Combo Gigabit Module



- 10 10/100/1000BASE-T Gigabit Ports
- 2 Combo 10/100/1000BASE-T or SFP

## DES-6509

### 12-Slot SFP Module



- 12 SFP Slots

## DES-6512

### 2-Port 10-Gigabit Module



- 2 XFP Slots

## DES-6511

### Redundant Power Supply



- Input: 90 to 264 VAC, 47 to 63 Hz
- Output: 3.4VDC, 4 to 80A; 12VDC, 0.1 to 2A
- Up to 2 of this Power Supply Unit can be installed in a DES-6500 Chassis

## Features & Benefits

### • Deployable as Core or Edge Switch

- » Core switch provides numerous high-speed fiber backbones for a campus and central office network.
- » Aggregation switch can provide high port density connections to workstations in an office environment, or to subscribers' CPE in a densely populated Ethernet metro area network.

### • Distribution Switching Method

- » Each line card can perform L2/3/4 on-board packet switching without relying on the control card.
- » The switch synchronizes the switching and routing information between the control card and the line cards to map out the fastest data transfer path

### • Dual Redundant Backup/Load-Sharing Control Modules

- » Each control module is equipped with its own switch fabric hardware and management agent.
- » Two modules can perform redundant backup and sharing of network traffic load and management tasks.

### • 802.1X Access Control-based Accounting

- » Enables period accounting, multiple accounting and statistics and RADIUS server support.
- » Enables carriers to implement complete Ethernet-based Internet services to home customers..

### • Rate Limiting Control

- » Bandwidth restriction applicable to categories of subscribers.
- » Useful for carriers offering services to home users in a metropolitan Ethernet network.

### • High Resiliency Provided through Software Features

- » Basic functions include: 802.1D/w/s Spanning Tree, 802.3ad Link Aggregation/Backup Redundancy.
- » Advanced functions include Rapid Ether Ring Protection (RERP) and VRRP support.

### • Robust Security

- » Advanced L2/L3/L4 ACL.
- » IP-MAC-Port Binding.
- » Virus/Malicious Traffic Flooding Prevention.
- » CPU Protection Policy (CPP) prevents degradation of switch's performance.

### • Bandwidth Management

- » Rate Limiting for end-users/subscribers' CPE.
- » Granular Bandwidth Control down to 64Kbits for Ingress and Egress traffic.

These chassis-based switches offer end-to-end connectivity and granular application control for enterprise campus and metropolitan area networks (MAN). They are ideal for deployment in environments where uninterrupted running of network applications and a high level of performance, security and control are required.

Featuring a flexible modular architecture and industry standard compliance, these switches provide scalable expansion and a high level of investment protection for businesses and telecom carriers to deploy Gigabit and 10-Gigabit packet switching and routing for office networking and Ethernet-based Internet services to the homes.

These switches feature minimum or zero network downtime, robust security and real-time running of bandwidth-intensive applications. Equipped with high-speed switch fabrics, redundant backup/load sharing capability and advanced software functions including complete IPv6 support, these switches provide the performance, high availability and future-proof architecture suitable for applications of not just today but well into the future.

These switches provide not only network access security but also protection against virus and worm attacks. Access security is provided through comprehensive policy-based ACL, port security, IP-MAC-Port binding features and Defeat IP Scan, while attacks hidden behind control protocols are thwarted to prevent the switch's CPU from being overwhelmed with unnecessary tasks which can cause degradation to a network's performance. These switches extend security to network management via such functions as SSH v2 and SNMP v3 with authentication and encryption of management traffic.

### • Advanced Service Engine (ASE)

- » Enables support of advanced Multi-Protocol Label Switching (MPLS), NAT or IPFIX functions.
- » Enables enterprises and service providers to build next-generation intelligent networks that deliver a wide variety of advanced, value-added services over a single infrastructure.

### • Multi-Protocol Label Switching (MPLS)

- » MPLS is independent of access technologies.
- » Can be integrated seamlessly over any existing infrastructure, such as IP, Frame Relay, ATM, or Ethernet. Subscribers' differing access links can be aggregated on an MPLS edge without changing their current environments.

### • Layer 3 IP Packet Routing with Network Address Translation (NAT)

- » Dynamic IP address generation for users on a campus LAN or Internet subscribers on an Ethernet metro area network services.
- » Allows the switch to be deployed for end-to-end services without incurring the cost of attaching external routers to packet switching devices.

### • IPv6 Ready

- » Supports IPv6 manageability, routing and multicasting.

### • Complete Management Support

- » Telnet/CLI/SNMP v1, v2c, v3 support.
- » RMON monitoring.
- » System/alert information, interface management.
- » 802.1v Protocol VLAN, Super VLAN, Private VLAN, Double VLAN.
- » L3 protocol-based policies.
- » Port mirroring/traffic redirection.

## DES-7206

### 6-Slot Chassis



- 2 Slots for Dual Control Modules
- 4 Slots for User-Selectable Port Modules
- 2 Slots for Redundant Backup Power Supplies
- 1 Slot for Fan Module
- Includes 7200-1200AC Power Supply and 7206-Fan Module

## DES-7210

### 10-Slot Chassis



- 2 Slots for Dual Control Modules
- 8 Slots for User-Selectable Port Modules
- 2 Slots for Redundant Backup Power Supplies
- 1 Slot for Fan Module
- Includes 7200-1200AC Power Supply and 7210-Fan Module

## 7200-CM1

### Control Module



- 96Gbps Switch Capacity
- For Use with 6-Slot Chassis

## 7200-CM2

### Control Module



- 192Gbps Switch Capacity
- For Use with 10-Slot Chassis

## 7200-CM3

### Control Module



- 96Gbps Switch Capacity
- Supports Advanced Service Engine (ASE)
- For Use with 6-Slot Chassis

## 7200-CM4

### Control Module



- 192Gbps Switch Capacity
- Supports Advanced Service Engine (ASE)
- For Use with 10-Slot Chassis

## 7200-ASE1

### Advanced Service Engine

- Advanced Service Engine for IPFIX Support

## 7200-ASE2

### Advanced Service Engine

- Advanced Service Engine for IPFIX Support

## 7200-ASE3

### Advanced Service Engine

- Advanced Service Engine for MPLS Support

## 7200-ASE4

### Advanced Service Engine

- Advanced Service Engine Supports up to 192K Hardware Routing Entries

## 7200-24

### 24-Port Gigabit Module



- 12 10/100/1000BASE-TX Ports
- 12 Combo 10/100/1000BASE-T/SFP Ports

## 7200-24G

### 24-Port Gigabit Module



- 12 SFP Slots
- 12 Combo 10/100/1000BASE-T/SFP Ports

## 7200-48

### 48-Port 10/100/1000BASE-T Module



- 44 10/100/1000BASE-T Ports
- 4 Combo 10/100/1000BASE-T/SFP Ports

## 7200-2XG

*2-Port 10-Gigabit Module*



- 2 XFP Slots

## 7200-4XG

*4-Port 10-Gigabit Module*



- 4 XFP Slots

## 7200-24P

*24-Port PoE 10/100/1000BASE-T Module*



- 12 802.3af PoE 10/100/1000BASE-T Ports
- 12 Combo 10/100/1000BASE-T/SFP Ports

## 7200-48P

*48-Port PoE 10/100/1000BASE-T Module*



- 44 802.3af PoE 10/100/1000BASE-T Ports
- 4 Combo 10/100/1000BASE-T 802.3af PoE/SFP Ports

## 7200-1200AC

*Redundant AC Power Supply*



- 1200W Power Output

## 7200-1200DC

*Redundant DC Power Supply*



- 1200W Power Output

## 7200-2000AC

*Redundant AC Power Supply*



- 2000W Power Output

## 7200-2000DC

*Redundant DC Power Supply*



- 2000W Power Output

## 7206-Fan

*Fan Module*



- For Use with 6-Slot Chassis

## 7210-Fan

*Fan Module*



- For Use with 10-Slot Chassis

## DES-7200 Series Chassis Switch Modules

CPU Engine	DES-7206	DES-7210
7200-CM1	√	
7200-CM2		√
7200-CM3^	√	
7200-CM4^		√
Advanced Service Engine	DES-7206	DES-7210
7200-ASE1**	√	√
7200-ASE2**	√	√
7200-ASE3**	√	√
7200-ASE4**	√	√
LAN Interface Module		
7200-24	√	√
7200-24G	√	√
7200-24P	√	√
7200-48	√	√
7200-48P	√	√
7200-2XG	√	√
7200-4XG	√	√
Power Supply		
7200-1200AC	√	√
7200-1200DC	√	√
7200-2000AC	√	√
7200-2000DC	√	√
Fan Tray Module		
7206-Fan	√	
7210-Fan		√

\* Figures are based on the usage of 2 control modules.

^ Support Advanced Service Engine(ASE)

\*\* Available in future

## DES-7200 Series Maximum Port Density

Interface Type	DES-7206	DES-7210
10/100/1000BASE-T Port	192	384
10/100/1000BASE-T Ports with PoE	192	384
SFP Slot	96	192
10-Gigabit Ethernet XFP Slot	16	32

## Features & Benefits

- Connect to Ethernet and Gigabit Switches
- Provide Backup Power for Switch's Built-in Power Supply
- Can be Installed as Stand-Alone Power Supply Units or Mounted in 19-Inch Multi-Slots Chassis
- Hot Swappable When Installed in Chassis
- Solid Metal Case Housing
- LED Status Indicators

These redundant power supplies (RPS) connect to the D-Link Ethernet or Gigabit switches to provide backup power for the built-in power supply units inside the switches. The redundant power supplies can be installed as stand-alone power supply units, or mounted in a DPS-900 or DPS-800 chassis. The chassis has multiple slots that can accommodate several redundant power supply units, and can be mounted in a standard 19-inch equipment rack. All RPS units have solid metal case housing and LED status indicators. As they are independent units, they are hot swappable when used with the chassis.

### DPS-200

#### AC Redundant Power Supply



- Maximum 60 Watts' Output Power
- 90 to 264 Volts, 47 to 63Hz AC Input Range
- Over Current Protection
- Can be mounted in DPS-800 or DPS-900 Chassis

### DPS-500DC

#### DC Redundant Power Supply



- Maximum 140 Watts' Output Power
- Over Current Protection
- Can be mounted in DPS-800 or DPS-900 Chassis

### DPS-300

#### AC Redundant Power Supply



- Maximum 90 Watts' Output Power
- 90 to 264 Volts, 47 to 63Hz AC Input Range
- Over Current Protection
- Can be mounted in DPS-800 or DPS-900 Chassis

### DPS-600

#### AC Redundant Power Supply



- Maximum 500 Watts' Output Power
- 90 to 264 Volts, 47 to 63Hz AC Input Range
- Over Current Protection
- 19-Inch Width for Mounting in Standard Equipment Racks

### DPS-500

#### AC Redundant Power Supply



- Maximum 140 Watts' Output Power
- 90 to 264 Volts, 47 to 63Hz AC Input Range
- Over Current Protection
- Can be mounted in DPS-800 or DPS-900 Chassis

### DPS-800

#### 2-Slot Chassis



- 2 Slots Accommodating 2 RPS Units
- 19-Inch Width for Mounting in Standard Equipment Racks

## Redundant Power Supply & LAN Switch Compatibility

Switch \ RPS	DPS-200 (60 Watts)	DPS-300 (90 Watts)	DPS-500 (140 Watts)	DPS-600 (500 Watts)
DES-3528	✓			
DES-3528P				✓
DES-3528G	✓			
DES-3552	✓			
DES-3552P				✓
DES-3526	✓			
DES-3550	✓			
DES-3828	✓			
DES-3828P				✓
DES-3852	✓			
DGS-3024		✓		
DGS-3048			✓	
DGS-3100-24	✓			
DGS-3100-24TG	✓			
DGS-3100-24P				✓
DGS-3100-48			✓	
DGS-3100-48P				✓
DGS-3224TGR		✓		
DGS-3312SR		✓		
DGS-3426			✓	
DGS-3427			✓	
DGS-3450			✓	
DGS-3612	✓			
DGS-3612G			✓	
DGS-3627			✓	
DGS-3627G			✓	
DGS-3650			✓	

### DPS-900

#### 8-Slot Chassis



- 8 Slots Accommodating 8 RPS Units
- 19-Inch Width for Mounting in Standard Equipment Racks

### DPS-CB400

#### Power Cable



- Power Cable for DPS-200, DPS-300 & DPS-500 RPS
- 4 Meter's Cable Length



## Managed Ethernet Switches

	Layer	Max. Port Density	10/100 Ports	PoE Ports	1000BASE-T Ports	SFP	100BASE-FX Ports	Open Slots	Stacking Ports	Stackable Units	Static Routing	Dynamic Routing	VLAN Groups	ACL	Single IP Mgmt
DES-3010G	L2	10	8	–	1	1	–	–	–	–	–	–	255	–	✓
DES-3010F	L2	10	8	–	1	–	1	–	–	–	–	–	255	–	✓
DES-3010FL	L2	10	8	–	1	–	1	–	–	–	–	–	255	–	✓
DES-3016	L2	16	16	–	–	–	–	–	–	–	–	–	255	–	✓
DES-3018	L2	18	16	–	2 <sup>(2)</sup>	2 <sup>(2)</sup>	2 <sup>(2)</sup>	2	–	–	–	–	255	–	✓
DES-3026	L2	26	24	–	2 <sup>(2)</sup>	2 <sup>(2)</sup>	2 <sup>(2)</sup>	2	–	–	–	–	255	–	✓
DES-3028	L2	28	24	–	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	–	–	–	–	4K	✓	✓
DES-3028P	L2	28	24	24 <sup>(3)</sup>	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	–	–	–	–	4K	✓	✓
DES-3052	L2	52	48	–	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	–	–	–	–	4K	✓	✓
DES-3052P	L2	52	48	48 <sup>(3)</sup>	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	–	–	–	–	4K	✓	✓
DES-3528	L2+	28	24	–	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	2 <sup>(5)</sup>	8	✓	–	4K	✓	✓
DES-3528DC	L2+	28	24	–	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	2 <sup>(5)</sup>	8	✓	–	4K	✓	✓
DES-3528G	L2+	28	24	–	4	4 <sup>(1)</sup>	4 <sup>(4)</sup>	–	2 <sup>(5)</sup>	8 <sup>(7)</sup>	✓	–	4K	✓	✓
DES-3528P	L2+	28	24	24 <sup>(6)</sup>	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	2 <sup>(5)</sup>	8	✓	–	4K	✓	✓
DES-3552	L2+	52	48	–	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	2 <sup>(5)</sup>	8	✓	–	4K	✓	✓
DES-3552P	L2+	52	48	48 <sup>(6)</sup>	4	2 <sup>(1)</sup>	2 <sup>(4)</sup>	–	2 <sup>(5)</sup>	8	✓	–	4K	✓	✓
DES-3526	L2	26	24	–	2	2 <sup>(1)</sup>	–	–	–	–	–	–	255	✓	✓
DES-3526DC	L2	26	24	–	2	2 <sup>(1)</sup>	–	–	–	–	–	–	255	✓	✓
DES-3550	L2	50	48	–	2	2 <sup>(1)</sup>	–	–	–	–	–	–	255	✓	✓
DES-3828	L3	28	24	–	2	2 <sup>(1)</sup>	–	–	–	–	✓	✓	4K	✓	✓
DES-3828DC	L3	28	24	–	2	2 <sup>(1)</sup>	–	–	–	–	✓	✓	4K	✓	✓
DES-3828P	L3	28	24	24 <sup>(3)</sup>	2	2 <sup>(1)</sup>	–	–	–	–	✓	✓	4K	✓	✓
DES-3852	L3	52	48	–	2	2 <sup>(1)</sup>	–	–	–	–	✓	✓	4K	✓	✓

<sup>(1)</sup> Combo Ports

<sup>(2)</sup> Optional Ports

<sup>(3)</sup> 802.3af PoE function is integrated into 10/100Mbps ports

<sup>(4)</sup> If SFP slots are configured with 100BASE-FX transceivers

<sup>(5)</sup> Stacking ports are for dual-purpose stacking/1000BASE-T connection and counted as part of the 4 built-in 10/100/1000Mbps ports

<sup>(6)</sup> 1-8 10/100 Mbps ports support up to 30w. The rest of the ports support 802.3af (up to 15.4w)

<sup>(7)</sup> DES-3528G can only stack with other DES-3528G

# Managed Gigabit Switches

	Layer	Max. Port Density	10/100/1000 Ports	SFP	PoE Ports	Other Ports	Open Slots	Stacking Ports	Stackable Units	10-Gigabit Ports	Static Routing	Dynamic Routing	VLAN Groups	ACL	Single IP Mgmt
DGS-3312SR	L3	12	4, 8 <sup>(2)</sup>	4 <sup>(1)</sup> , 8 <sup>(2)</sup>	–	–	2	12 <sup>(2)</sup>	1, 12 <sup>(2)</sup>	–	✓	✓	255	✓	✓
DGS-3024	L2	24	24	4 <sup>(1)</sup>	–	–	–	–	–	–	–	–	255	–	–
DGS-3048	L2	48	48	4 <sup>(1)</sup>	–	–	–	–	–	–	–	–	255	–	–
DGS-3100-24	L2	24	24	4 <sup>(1)</sup>	–	–	–	2	6	–	–	–	256	✓	–
DGS-3100-24P	L2	24	24	4 <sup>(1)</sup>	24 <sup>(3)</sup>	–	–	2	6	–	–	–	256	✓	–
DGS-3100-48	L2	48	48	4 <sup>(1)</sup>	–	–	–	2	6	–	–	–	256	✓	–
DGS-3100-48P	L2	48	48	4 <sup>(1)</sup>	48 <sup>(3)</sup>	–	–	2	6	–	–	–	256	✓	–
DGS-3200-10	L2	10	10	2 <sup>(1)</sup>	–	–	–	–	–	–	–	–	4K	✓	✓
DGS-3200-16	L2	16	16	2 <sup>(1)</sup>	–	–	–	–	–	–	–	–	4K	✓	✓
DGS-3426	L2+	26	24	4 <sup>(1)</sup>	–	–	2	2 <sup>(2)</sup>	12	2 <sup>(2)</sup>	✓	–	4K	✓	✓
DGS-3426P	L2+	26	24	4 <sup>(1)</sup>	24 <sup>(3)</sup>	–	2	2 <sup>(2)</sup>	12	2 <sup>(2)</sup>	✓	–	4K	✓	✓
DGS-3427	L2+	27	24	4 <sup>(1)</sup>	–	–	3	2 <sup>(2)</sup>	12	3 <sup>(2)</sup>	✓	–	4K	✓	✓
DGS-3450	L2+	50	48	4 <sup>(1)</sup>	–	–	2	2 <sup>(2)</sup>	12	2 <sup>(2)</sup>	✓	–	4K	✓	✓
DGS-3612	L3	12	12	4 <sup>(1)</sup>	–	–	–	–	–	–	✓	✓	4K	✓	✓
DGS-3612G	L3	12	4 <sup>(1)</sup>	12	–	–	–	–	–	–	✓	✓	4K	✓	✓
DGS-3627	L3	27	24	4 <sup>(1)</sup>	–	–	3	2 <sup>(2)</sup>	12	3 <sup>(2)</sup>	✓	✓	4K	✓	✓
DGS-3627G	L3	27	4 <sup>(1)</sup>	24	–	–	3	2 <sup>(2)</sup>	12	3 <sup>(2)</sup>	✓	✓	4K	✓	✓
DGS-3650	L3	50	48	4 <sup>(1)</sup>	–	–	2	2 <sup>(2)</sup>	12	2 <sup>(2)</sup>	✓	✓	4K	✓	✓
DES-6500	L3	192	96 <sup>(2)</sup>	96 <sup>(2)</sup>	–	192, 64 <sup>(5)</sup>	8	–	–	16 <sup>(2)</sup>	✓	✓	4K	✓	✓

<sup>(1)</sup> Combo ports

<sup>(2)</sup> Optional ports

<sup>(3)</sup> 802.3af PoE function is integrated into 10/100/1000Mbps ports

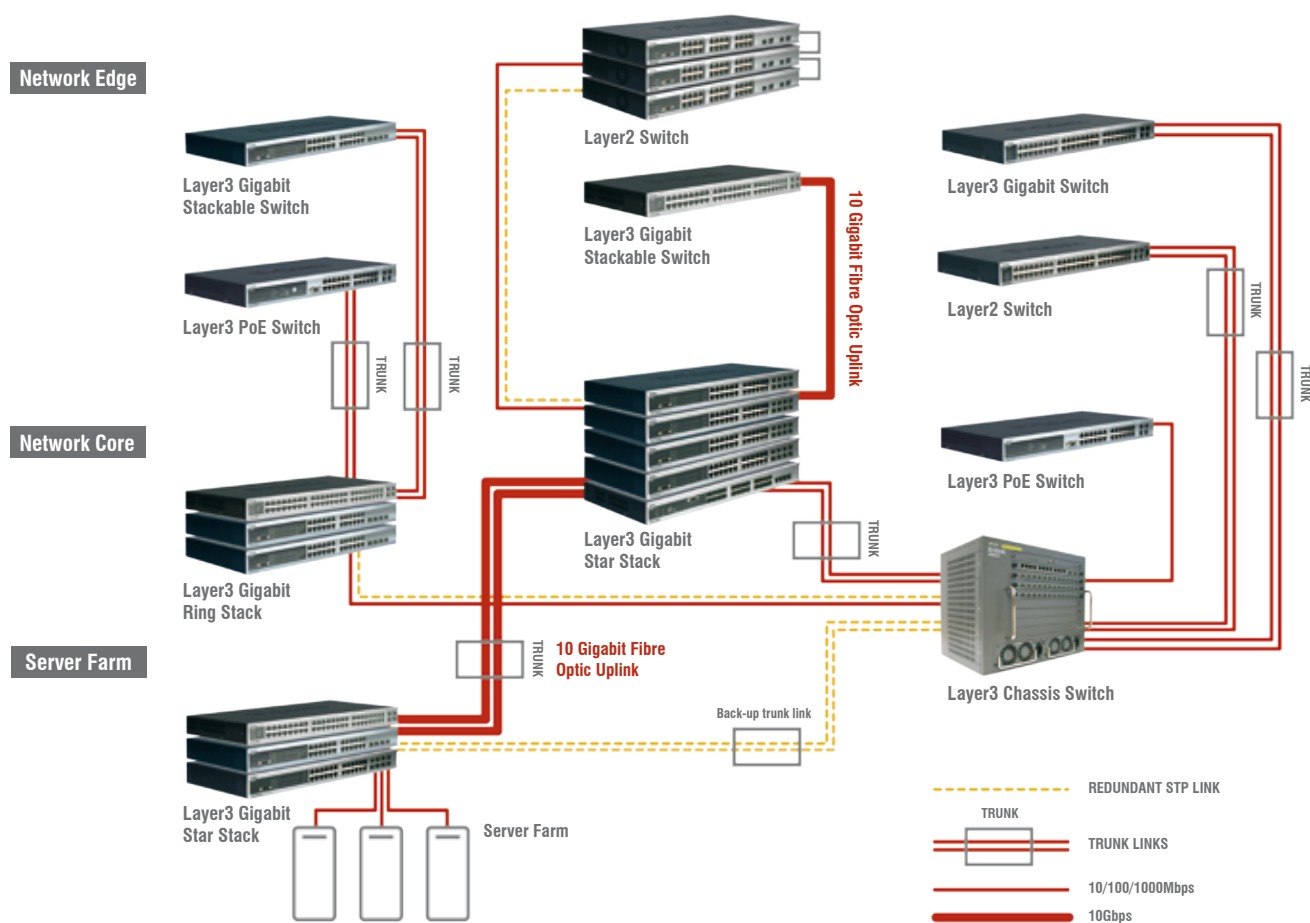
<sup>(4)</sup> Star stacking: 6 DGS-3324SR, DGS-3326GSR or DGS-3350SR units + 1 DGS-3324SR stacking master; Ring stacking: 12 units

<sup>(5)</sup> Up to 192 10/100Mbps optional ports, 64 100BASE-FX optional ports, 64 1000BASE-SX optional ports

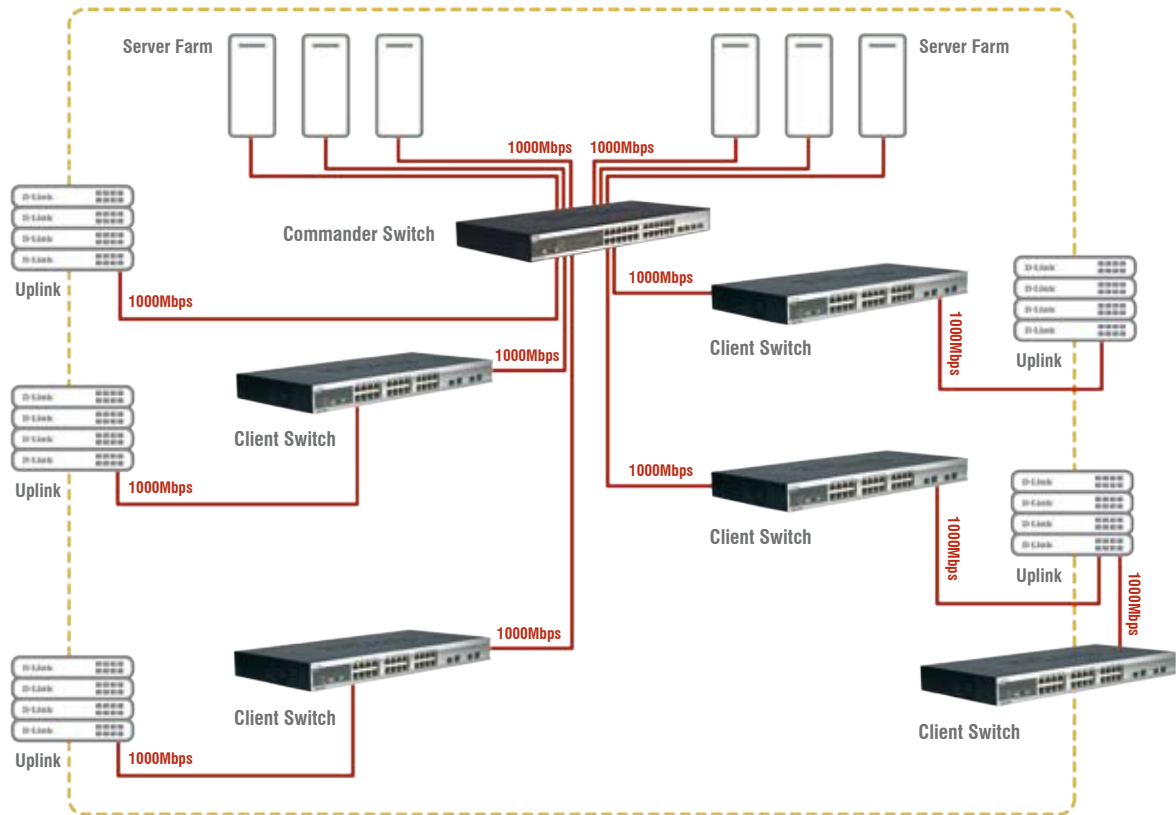
<sup>(6)</sup> 1 DGS-3312SR stacking master + 12 DES-3226S or DES-3326SR units.

# LAN SWITCHES

## *xStack Network Solution*



## Single IP Management - Control up to 32 Devices via One IP Address

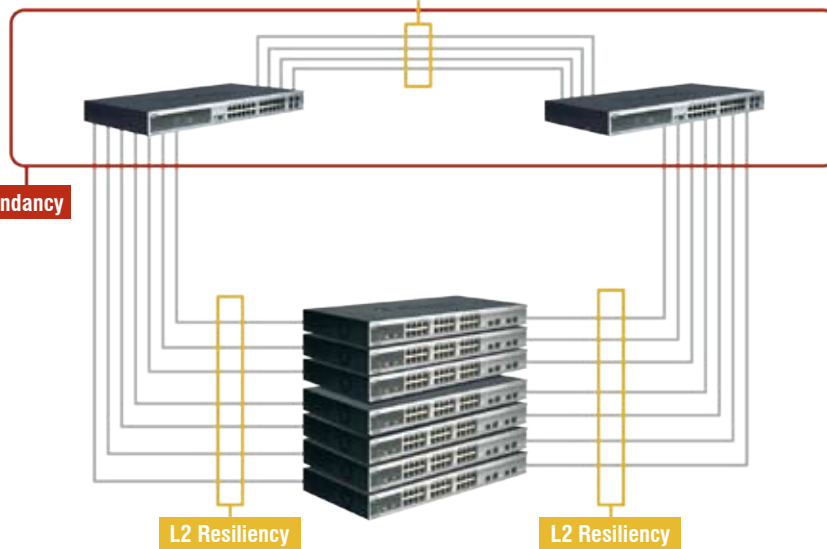


### Layer3 Core

### L2 Resiliency

### L3 Redundancy

### Layer2 Edge



## Features & Benefits

- Full/Half Duplex Operation
- 802.3x Flow Control in Full-Duplex
- ACPI Wake-On-LAN Power Management
- Optional Remote Boot Function

More than just for simple network interface, D-Link Ethernet adapters are designed for the workstations to operate in a secure network environment. They provide many software functions to make workstations an integrated part of a managed network.

The Ethernet server adapters provide the necessary bandwidth for server deployment for fast access by workstations. These adapters provide multiple ports with port trunk supporting load balancing and backup links for mission critical applications with redundancy that maximizes network uptime.

### DFE-528TX

#### *Ethernet PCI Adapter*



- 10/100BASE-TX Port
- Supports Windows, NetWare, Unix, Mac OS

### DFE-530TX

#### *Ethernet PCI Adapter*



- 10/100BASE-TX Port
- ACPI Wake-On-LAN Power Management
- 802.1x Port-Based Authentication
- Socket for Optional Remote Boot ROM
- Supports Windows, NetWare, IBM LAN, Sun PC-NFS, FTP PC/TCP, Linux

### DFE-530TX+

#### *Ethernet PCI Adapter*



- 10/100BASE-TX Port
- ACPI Wake-On-LAN Power Management
- Socket for Optional Remote Boot ROM
- Supports Windows, NetWare, Linux, Mac OS, Packet Driver, NDIS Driver

### DFE-538TX

#### *Ethernet PCI Adapter*



- 10/100BASE-TX Port
- ACPI Wake-On-LAN Power Management
- 802.3x Flow Control Full-Duplex Mode Support
- Socket for Optional Remote Boot ROM
- Supports Windows, NetWare, IBM LAN, FTP PC/TCP, SCO Open, Linux

### DFE-550TX

#### *Advanced Ethernet PCI Adapter*



- 10/100BASE-TX Port
- ACPI Wake-On-LAN Power Management
- IP Multicast
- 802.1Q VLAN, 802.1p Priority Queues
- SNMP Support
- Desktop Management Interface (DMI) Driver Provided
- Socket for Optional Remote Boot ROM
- Supports Windows, NetWare, IBM LAN, Sun PC-NFS, FTP PC/TCP, SCO OpenServer, NCSA, Linux

## DFE-580TX

### 4-Port Ethernet Server PCI Adapter



- 4 10/100BASE-TX Ports
- 800Mbps Server-to-Switch Port Trunk
- Per-Port Load Balance/Fault Tolerance
- Dynamic Fail Over Function in Backup Mode
- 802.1p Priority Queues
- Supports in Windows, Linux

## DFE-551FX

### Fiber Ethernet PCI Adapter



- 100BASE-FX SC Port
- Up to 2 km Multi-Mode Fiber Cable Distance
- ACPI Wake-On-LAN Power Management
- 802.1Q VLAN, 802.1P Priority Queues
- Socket for Optional Remote Boot ROM
- Supports Windows, Mac OS, NetWare, Linux

## DFE-690TXD

### Ethernet CardBus Adapter



- 10/100BASE-TX Port
- 32-bit CardBus Interface to PC Host
- Supports Windows, NetWare, NCSA, Linux

## REMOTE BOOT ROM

The remote boot ROM are optional chips that can be plugged onto the adapters for remote boot from boot servers. This function allows users to deploy the Ethernet adapters in diskless workstations and configure them with access security. Diskless workstations are useful for deployment at public network sites such as schools and libraries. These workstations cannot boot by themselves; users need to key in their passwords to remote boot up the system from a boot server.

### DFE-530+R

#### RPL Boot ROM

- For Use with DFE-530TX+ Ethernet PCI Adapter vFX

### DFE-530+P

#### PXE Boot ROM

- For Use with DFE-530TX+ Ethernet PCI Adapter vFX

### DFE-534R3

#### RPL Boot ROM

- For Use with DFE-530TX Ethernet PCI Adapter

### DFE-534P3

#### PXE Boot ROM

- For Use with DFE-530TX Ethernet PCI Adapter

### DFE-538R

#### RPL Boot ROM

- For Use with DFE-538TX Ethernet PCI Adapter vF1

### DFE-538P

#### PXE Boot ROM

- For Use with DFE-538TX Ethernet PCI Adapter vF1

### DFE-551R

#### RPL Boot ROM

- For Use with DFE-551FX Ethernet PCI Adapter

### DFE-551P

#### PXE Boot ROM

- For Use with DFE-551FX Ethernet PCI Adapter

### DFE-554C

#### RPL Boot ROM

- For Use with DFE-550TX Ethernet PCI Adapter vC3

### DFE-554CP

#### PXE Boot ROM

- For Use with DFE-550TX Ethernet PCI Adapter vC3

### DGE-528R

#### RPL/PXE Boot ROM

- For Use with DGE-528T Gigabit PCI Adapter

## Features & Benefits

- **PCI Express 4x Interface**
  - » 2Gbps data addressing for higher throughput.
  - » Ideal for servers, storage and system area networks (SAN).
  - » Lower system level power requirements.
  - » Backward compatible with PCI and PCI-X addressing, allows all existing applications and Operating Systems to function unchanged.
  - » Hot-swappable, can replace adapter without turning OFF server.
- **Full-Duplex Mode**
  - » Doubles network data transfer rate to 2Gbps, providing servers with bottleneck-free paths for server-client applications.
- **802.3x Flow Control**
  - » Operating in full-duplex mode, minimizes data packet loss between server and Gigabit switch
- **Wake-On-LAN Power Management**
  - » Allows network administrators to power ON/OFF computers from remote sites.
  - » Useful for application in secure network environments such as in a school or public library.
- **On-Board Screening of VLAN Tagged Ethernet Frames**
  - » Allows administrators to configure workstations and servers with Virtual LAN security or traffic segmentation.
- **802.1p Priority Queues Support**
  - » Allows workstations and servers to run time-sensitive applications such as voice and video.

The Gigabit adapters bring Gigabit network speed to the desktop PC and servers. On the high-end are the fiber Gigabit PCI Express x4 high-performance adapters that let businesses take advantage of the PCI Express (PCIe) slots of their servers to enhance network performance with fiber-optic connectivity. The adapters' dedicated input/output (I/O) bandwidth PCIe ensures priority performance without bus sharing for Gigabit Ethernet connectivity in fiber-optic networks.

For workstations, the copper Gigabit adapters provide an inexpensive alternative solution to the fiber-optic. Using the existing low-cost Cat. 5 copper twisted-pair network cable as the transmission media, these adapters allow desktops computers to instantly upgrade to Gigabit capability without requiring installation of new, expensive fiber cables.

### DGE-528T

#### Copper Gigabit PCI Adapter



- 10/100/1000BASE-T Port
- Supports PCI 33/66MHz Clock Speed
- 8KB Transmit/64KB Receive FIFO to Reduce PC Overheads
- ACPI Wake-On-LAN Power Management
- 802.1Q VLAN Tagging
- Supports Windows, NetWare, Linux, Mac OS

### DGE-530T

#### Copper Gigabit PCI Adapter



- 10/100/1000BASE-T Port
- ACPI Wake-On-LAN Power Management
- 802.1p Priority Queue, 802.1Q VLAN
- Built-in MIB for SNMP Management
- Supports Windows, NetWare, Linux, Mac OS

### DGE-660TD

#### Copper Gigabit CardBus Adapter



- 10/100/1000BASE-T Port
- 32-bit CardBus Interface to PC Host
- 8KB Transmit/64KB Receive FIFO to Reduce PC Overheads
- Low Laptop PC Battery Power Consumption
- Supports Windows, NetWare, NDIS

### DGE-560SX

#### Fiber Gigabit PCI Express x4 Adapter



- 1000BASE-SX SC Port
- PCI-E 1.0a Interface With 2.5GHz Signaling
- Up to 550 m Multi-Mode Fiber Cable Length
- ACPI 2.0 Power Management
- 9K Bytes Jumbo Frame
- 802.1p Priority Queue, 802.1Q VLAN
- Built-in MIB for SNMP Management
- Laser Eye Safety Certified
- Supports Windows, Linux



**SFP Transceivers**

	DEM-311GT	DEM-312GT2	DEM-310GT	DEM-314GT	DEM-315GT	DGS-712	DEM-210	DEM-211
								
Cable	Multi-Mode Fiber	Multi-Mode Fiber	Single-Mode Fiber	Single-Mode Fiber	Single-Mode Fiber	Cat. 5 Twisted-Pair	Single-Mode Fiber	Multi-Mode Fiber
Fiber Type	50/125um or 62.5/125um Multi-Mode	62.5/125um Multi-Mode	9/125um Single-Mode	9/125um Single-Mode	9/125um Single-Mode	–	9/125um Single-Mode	50/125um or 62.5/125um Multi-Mode
Max. Cable Length	550 m	2 km	10 km	50 km	80 km	100 m	15 km	2 km
Standard	802.3z 1000BASE-SX	802.3z 1000BASE-SX	802.3z 1000BASE-LX	802.3z 1000BASE-LX	802.3z 1000BASE-LX	802.3ab 1000BASE-T	802.3u 100BASE-FX	802.3u 100BASE-FX
Data Rate	1 Gbps	1 Gbps	1 Gbps	1 Gbps	1 Gbps	1 Gbps	100Mbps	100Mbps
Port Type	LC	LC	LC	LC	LC	RJ-45	LC	LC
Wave Length	850 nm	1310 nm	1310 nm	1550 nm	1550 nm	–	1310 nm	1310 nm
Power Support	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V	3.3V

**Wavelength Division Multiplexing (WDM)  
Bi-Directional SFP Transceivers**

	DEM-330T	DEM-330R	DEM-331T	DEM-331R
				
Cable	Single-Mode Fiber	Single-Mode Fiber	Single-Mode Fiber	Single-Mode Fiber
Fiber Type	9/125 um	9/125 um	9/125 um	9/125 um
Max. Cable Length	10 km	10 km	40 km	40 km
Standard	1000BASE-LX	1000BASE-LX	1000BASE-LX	1000BASE-LX
Data Rate	1 Gbps	1 Gbps	1 Gbps	1 Gbps
Port Type	LC	LC	LC	LC
Wave Length	TX: 1550 nm RX: 1310 nm	TX: 1310 nm RX: 1550 nm	TX: 1550 nm RX: 1310 nm	TX: 1310 nm RX: 1550 nm
Power Support	3.3V	3.3V	3.3V	3.3V

**XFP Transceivers**

	DEM-421XT	DEM-422XT	DEM-423XT
			
Cable	Multi-Mode Fiber	Single-Mode Fiber	Single-Mode Fiber
Fiber Type	50/125um or 62.5/125um Multi-Mode	9/125um Single Mode	9/125um Single Mode
Max. Cable Length	300 m	10 km	40 km
Standard	802.3ae 10GBASE-SR	802.3ae 10GBASE-LR	802.3ae 10GBASE-ER
Data Rate	10Gbps	10Gbps	10Gbps
Port Type	LC	LC	LC
Wave Length	850 nm	1310 nm	1550 nm
Power Support	3.3V/5V	3.3V/5V	3.3V/5V

## Features & Benefits

- Convert Signals on Twisted-Pair Copper Cables to Signals on Fiber Cables
- Convert Signals on Multi-Mode Fiber Cables to Signals on Single-Mode Fiber Cables
- Extend Network Distance to Various Lengths
- No Budget Loss
- Minimal Reflection
- LLR Enable/Disable
- Fiber Auto-Negotiation/Manual
- Can Be Used as Stand-Alone Converters or Installed in Standard Rack-Mount Chassis
- Redundant Power Supply Option for Chassis-Based Configuration
- Optional Management Module to Manage Media Converters Installed in Chassis

The media converter converts signals for transmission on one type of cable to signals for transmission on another type of cable. This allows IT personnel to connect longer distance fiber cables between devices that are designed only for shorter distance cables, such as the Cat. 5 twisted-pair cable.

The WDM media converters use the Wavelength Division Multiplexing (WDM) single wavelength single-fiber technology for connection to avoid budget losses. These media converters are used in pair; each pair combines transmission (Tx) and reception (Rx) signals into one fiber strand using two wavelengths.

Each media converter is housed in a solid metal case, complete with LED status indicators and AC to DC power adapter. It can be used as stand-alone converter, or installed in a chassis. In case it is installed in the chassis, the metal case must be removed and the PC board is slid into a chassis slot. The chassis's power supply will be used instead of the media converters' own AC to DC power adapters. All media converters are hot swappable when used with the chassis.

A management option is available for installation in the chassis with. The management module lets users monitor in real-time the status of all media converters and power supplies in the chassis. It also sends out alarms to alert users of abnormal situations. Management follows industry standards, including SNMP and http, allowing users to monitor and manage from a third-party SNMP management workstation or via a web browser.

### DMC-300M

*Twisted-Pair to Fiber Ethernet Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Signals
- Extends Network Distance Up to 2 km on Multi-Mode Fiber Cable
- MT-RJ Fiber Connector

### DMC-515SC

*Twisted-Pair to Fiber Ethernet Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Signals
- Extends Network Distance Up to 15 km on Single-Mode Fiber Cable

### DMC-300SC

*Twisted-Pair to Fiber Ethernet Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Signals
- Extends Network Distance Up to 2 km on Multi-Mode Fiber Cable

### DMC-530SC

*Twisted-Pair to Fiber Ethernet Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Signals
- Extends Network Distance Up to 30 km on Single-Mode Fiber Cable

## DMC-560SC

### *Twisted-Pair to Fiber Ethernet Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Signals
- Extends Network Distance Up to 60 km on Single-Mode Fiber Cable

## DMC-615SC

### *Fiber to Fiber Ethernet Media Converter*



- Converts 100BASE-FX Multi-Mode Fiber to 100BASE-FX Single-Mode Fiber Signals
- Extends Network Connection Up to 15 km on Single-Mode Fiber Cable

## DMC-700SC

### *Twisted-Pair to Fiber Gigabit Media Converter*



- Converts 1000BASE-T Gigabit Twisted-Pair to 1000BASE-SX Gigabit Fiber Signals
- Extends Network Distance Up to 550 m on Multi-Mode Fiber Cable
- Link Pass-Through Function

## DMC-805G

### *Twisted-Pair to Fiber Gigabit Media Converter*



- Converts 1000BASE-T Twisted-Pair to 1000BASE-SX/LX Gigabit Fiber Signals
- SFP Slot for of User-Selectable Fiber Transceiver
- Extends Network Connection to Various Lengths Depending on SFP Transceiver Capability
- Link Pass-Through Function

## DMC-810SC

### *Twisted-Pair to Fiber Gigabit Media Converter*



- Converts 1000BASE-T Gigabit Twisted-Pair to 1000BASE-LX Gigabit Fiber Signals
- Extends Network Distance Up to 10 km on Single-Mode Fiber Cable
- Link Pass-Through Function

## DMC-820SC

### *Twisted-Pair to Fiber Gigabit Media Converter*



- Converts 1000BASE-T Gigabit Twisted-Pair to 1000BASE-LX Gigabit Fiber Signals
- Extends Network Distance Up to 20 km on Single-Mode Fiber Cable
- Link Pass-Through Function

## DMC-1530SC

### *Twisted-Pair to Fiber Ethernet Smart Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Fiber Signals
- Extends Network Distance Up to 30 km on Single-Mode Fiber Cable
- Provides Intelligent Functions Such as LLCf, LLR
- Link Pass-Through Function

## DMC-1580SC

### *Twisted-Pair to Fiber Ethernet Smart Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Fiber Signals
- Extends Network Distance Up to 80 km on Single-Mode Fiber Cable
- Provides Intelligent Functions Such as LLCf, LLR
- Link Pass-Through Function

## DMC-920R

### *Twisted-Pair to Fiber Ethernet WDM Media Converter*



- Converts 10/100BASE-TX to 100BASE-FX Fiber Signals
- Uses in Pair With DMC-920T or Equivalent Device
- Extends Network Distance Up to 20 km on Single-Mode Fiber Cable

**DMC-920T***Twisted-Pair to Fiber Ethernet  
WDM Media Converter*

- Converts 10/100BASE-TX to 100BASE-FX Fiber Signals
- Uses in Pair With DMC-920R or Equivalent Device
- Extends Network Distance Up to 20 km on Single-Mode Fiber Cable

**DMC-1910R***Twisted-Pair to Fiber Gigabit  
WDM Media Converter*

- Converts 1000BASE-T Gigabit Twisted-Pair to 1000BASE-LX Gigabit Fiber Signals
- Uses in Pair With DMC-1910T or Equivalent Device
- Up to 15 km Single-Mode Fiber Cable Length

**DMC-1910T***Twisted-Pair to Fiber Gigabit  
WDM Media Converter*

- Converts 1000BASE-T Gigabit Twisted-Pair to 1000BASE-LX Gigabit Fiber Signals
- Uses in Pair With DMC-1910R or Equivalent Device
- Up to 15 km Single-Mode Fiber Cable Length

**DMC-1000***Media Converter Chassis*

- 16 Bays to House Up to 16 Media Converters
- Standard 19-Inch Rack-Mountable
- Hot Swapping of Media Converters
- Hot Swappable Redundant Power Supply
- Power Redundancy & Power Isolation
- 1 Universal Internal AC to DC Power Supply Provided
- Second AC to DC Power Supply for Load-Sharing Purposes (Optional)
- Media Converter Power Isolation for Electrical Isolation From Each Bay

**DMC-1001***Redundant Power Supply*

- 90 to 260 VAC/47 to 63 Hz Auto-Switching Input Power
- Power Overload Protection
- Load Sharing Support When 2 of This RPS Installed in DMC-1000 Chassis

**DMC-1002***Management Module*

- SNMP/Web-Based Standards
- 10/100BASE-TX Ethernet & RS-232 Console Ports
- Real-Time Display of Link, Speed, Duplex Status of Media Converters
- Menu-Driven Terminal Program for Management via Console Port or Telnet
- Built-in SNMP Agent
- Supported Traps: Cold start, Warm Start, Authentication Fail, Power Fail, Fan Fail, Module Insertion, Module Pullout, Port Link Down, Port Link Up
- Factory Reset & Remote Software Reboot
- Remote Setting of Configurations of Smart Media Converters (LLCF Enable, LLR Enable, Port Enable, Auto-Negotiation Enable)
- Configuration Setting Upload/Download Through TFTP/Web
- TFTP/Web-Based Firmware Upgrade

**STAND-ALONE MEDIA CONVERTERS**

The stand-alone media converters are stand-alone devices that plug directly to the network switches, installed independently of any media converter chassis. They are cost-effective devices that convert twisted-pair Ethernet cable signals to fiber Ethernet cable signals.

**DFE-855***Twisted-Pair to Fiber Ethernet Media Converter*

- Converts 10/100BASE-TX to 100BASE-FX Signals
- Extends Network Distance Up to 2 km on Multi-Mode Fiber Cable

## Media Converters

Media Converter	Media Type Conversion	Max. Cable Length	Network Speed	Fiber Connector	Wave Length	Min. Tx Power (Launch Power)	Max. Tx Power (Launch Power)	Sensitivity	Power Budget
<b>DMC-300M</b>	Copper to Multi-Mode Fiber	2 km	100Mbps	MT-RJ	1300 nm	-23.5 dB	-14 dB	-31 dB	7.5 V
<b>DMC-300SC</b>	Copper to Multi-Mode Fiber	2 km	100Mbps	SC	1300 nm	-23.5 dB	-14 dB	-31 dB	7.5 V
<b>DMC-515SC</b>	Copper to Single-Mode Fiber	15 km	100Mbps	SC	1310 nm	-20 dB	0 dB	-32 dB	12 V
<b>DMC-530SC</b>	Copper to Single-Mode Fiber	30 km	100Mbps	SC	1310 nm	-15 dB	-8 dB	-34 dB	19 V
<b>DMC-560SC</b>	Copper to Single-Mode Fiber	60 km	100Mbps	SC	1310 nm	-5 dB	0 dB	-35 dB	30 V
<b>DMC-615SC</b>	Multi-Mode to Single-Mode Fiber	15 km	100Mbps	SC	1310 nm	-15 dB	-8 dB	-31 dB	16 V
<b>DMC-700SC</b>	Copper to Multi-Mode Fiber	550 m	1Gbps	SC	850 nm	-9.5 dB	-4 dB	-12.5dB	3 V
<b>DMC-805G</b>	Copper to Fiber	-	1Gbps	SFP Slot	-	-	-	-	-
<b>DMC-810SC</b>	Copper to Single-Mode Fiber	10 km	1Gbps	SC	1300 nm	-9.5 dB	-3 dB	-14.4 dB	4.9 V
<b>DMC-920R</b>	Copper to Single-Mode Fiber	20 km	100Mbps	SC	Tx: 1310 nm Rx: 1550 nm	-15 dB	-7 dB	-32 dB	17 V
<b>DMC-920T</b>	Copper to Single-Mode Fiber	20 km	100Mbps	SC	Tx: 1550 nm Rx: 1310 nm	-18 dB	-7 dB	-32 dB	14 V
<b>DMC-1530SC</b>	Copper to Single-Mode Fiber	30 km	100Mbps	SC	1310 nm	-15 dB	-8 dB	-34 dB	19 V
<b>DMC-1580SC</b>	Copper to Single-Mode Fiber	80 km	100Mbps	SC	1550 nm	-5 dB	0 dB	-35 dB	30 V
<b>DMC-1910R</b>	Copper to Single-Mode Fiber	15 km	1Gbps	LC	Tx: 1310 nm Rx: 1550 nm	-9 dB	-3 dB	-21 dB	12 V
<b>DMC-1910T</b>	Copper to Single-Mode Fiber	15 km	1Gbps	LC	Tx: 1550 nm Rx: 1310 nm	-9 dB	-3 dB	-21 dB	12 V
<b>DFE-855</b>	Copper to Multi-Mode Fiber	2 km	100Mbps	SC	1310 nm	-19 dB	-14 dB	-34 dB	5 V

### Features & Benefits

- **Standard 110-240VAC Conversion to Low-Voltage DC Power**
  - » Use existing LAN cables to power network devices.
  - » A single Cat. 5 or better cable can carry both Ethernet data and DC power.
  - » Simplify network hardware integration and power management.
  - » Network devices do not need to confine to locations near power outlets.
- **Central Power Source Provision to Entire LAN Infrastructure**
  - » Network accessories can be scattered around and connected to single PoE midspan or PoE switch.
  - » Network devices do not need to confine to locations near power outlets.
  - » Eliminate time and cost of installing separate power cabling and providing dedicated, uninterrupted power supply for each individual network device.
- **Guaranteed Power Protection Against Unforeseen Emergencies**
  - » PoE midspans and PoE switches can be connected to Uninterruptible Power Supply (UPS).
  - » Continuous operation for all connected network devices during power failures.

Power Over Ethernet (PoE) adapters and midspans are designed to help simplify network maintenance and deployments at offices, factories and Wi-Fi hot spots. They allow surveillance cameras and wireless access points to be installed on building rooftops, ceilings or high walls for maximum coverage. Cameras and wireless access points can be placed up to 100 meters away from the power sources. It is at these places that wall AC outlets are inaccessible and providing power to these locations is difficult and expensive.

PoE adapters and midspans are also handy for Internet telephone installation at offices, eliminating the need to individually power each IP phone. By transmitting remote power through the standard network cabling, these adapters do away with the need for an AC outlet at each device location. Only a single Ethernet cable is run to each IP phone, camera or wireless AP, instead of separate power and data cables.

#### DWL-P200

##### *Power Over Ethernet Adapter*



- Transmits Power Up to 100 m<sup>1</sup>
- Selectable 5VDC or 12VDC Power Output
- Power Surge Protection
- Includes Base Unit & Terminal Unit
- No Need to Connect to PoE Switch

#### DWL-P50

##### *Power Over Ethernet Adapter*



- 802.3af PoE Standard Compliance
- Transmits Power Up to 100 m<sup>1</sup>
- Selectable 5VDC or 12VDC Power Output
- Power Surge Protection
- Connects to 802.3af Compliant PoE Switch or Midspan

#### DWL-P1012

##### *12-Port Power Over Ethernet Midspan*



- 12 802.3af PoE Ports
- Management Through Web Browser or Web Smart Utility
- PoE Port Grouping & Scheduling
- 19-Inch Rack Size for Installation in Equipment Racks

## Features & Benefits

- **High Transmission Rate**

- » The latest generation of D-Link Powerline adapters (DHP-300) can deliver data transfer rates of up to 200Mbps.
- » Ideal for streaming video and music from PC or storage servers in other rooms to High-Definition TV and Media Players in living room.

- **Quality of Service Support**

- » Video, Internet phone and on-line games won't experience glitches while file downloads or web surfing are taking place.

- **Uses Different AC Frequencies**

- » Household appliances' electrical current doesn't interfere with the data network.

- **Data Encryption/Net ID Security**

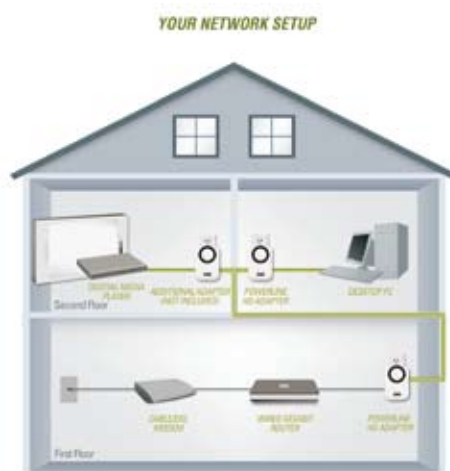
- » Keep out intruders in the same building.
- » Isolate home or office network from users in other apartments on the same floor that share the building electrical wiring.

- **802.1Q VLAN Tag**

- » Network isolation to prevent Internet phone from being tapped.

Powerline transmits data on the electrical wiring and does not require any new network cables. Because power outlets are located on nearly every wall of a house, users can easily connect the network and share Internet access. It is ideal for connecting home network entertainment components normally located near a power outlet. Any Ethernet-ready devices, such as broadband routers, computers, High Definition TV, digital video recorders, game consoles, Internet cameras, print servers and D-Link Media Players can be added to a home network.

Powerline can be used to extend a Wi-Fi network in the home or small office building. A pair of Powerline adapters can link two wireless locations without the need to run Ethernet cables. Combined with a broadband cable/DSL connection, every room with electrical outlets will have easy access to high-speed Internet connection.



### DHP-200

#### *Powerline Ethernet Adapter*



- HomePlug 1.0 Standard
- 4 to 21MHz Frequency Band
- AC Power Prongs
- 10/100BASE-TX Ethernet Port
- Enhanced 85Mbps Data Transfer
- 56-Bit DES Data Encryption

### DHP-201

#### *Powerline Ethernet Starter Kit*



- Includes 2 DHP-200 Powerline Ethernet Adapters

### DHP-300

#### *Powerline HD Ethernet Adapter*



- 2 to 32MHz Frequency Band
- AC Power Prongs
- 10/100BASE-TX Ethernet Port
- 200Mbps Data Transfer
- 3DES Data Encryption

### DHP-301

#### *Powerline HD Ethernet Starter Kit*



- Includes 2 DHP-300 Powerline HD Ethernet Adapters



## Features & Benefits

### • Save Money & Desktop Space

- » Users with two PCs who need to use them at the same time can control their computers from a set of keyboard, monitor and mouse.
- » Users of small laptop computers can connect a better, bigger monitor to connect both computers.
- » Useful for home users, test labs and IT personnel.

### • Auto-Scan Connected Servers/ Computers

- » Automatic refreshing to see if connected computers are still "alive".

### • Audible Signaling

- » Audible feedback for confirmation while switching back and forth between connected computers.

### • Audio Socket

- » Allows two connected PC to share a single set of speakers.
- » Connects to a headphone.

### • Flexible Computer Selection Methods

- » Users can select a connected computer by pushing a button on the KVM switch or by pressing a combination of "hot keys" on the keyboard.

### • Direct Power Input from Connected Computers

- » No need to attach an external power adapter or power cable to the KVM switch.

The Keyboard, Video, Mouse (KVM) switches allow users to control of several computers or servers through a single keyboard, monitor and mouse. The computers and servers are connected to a KVM switch. From a single console, users can switch back and forth among the computers with a push of a button or hot keys. It's a very cost-effective way to control multiple computers that do different tasks.

The KVM switch over IP provides remote KVM access via a LAN or an Internet connection to a server. Designed for server control, this appliance integrates KVM, network connection and external modem support in a one-box solution.

### DKVM-2K

#### 2-Port KVM Switch



- KVM Ports
- PS/2 Keyboard & Mouse Support
- 2 Sets of KVM Cables Attached to KVM Switch

### KVM-121

#### 2-Port KVM Switch



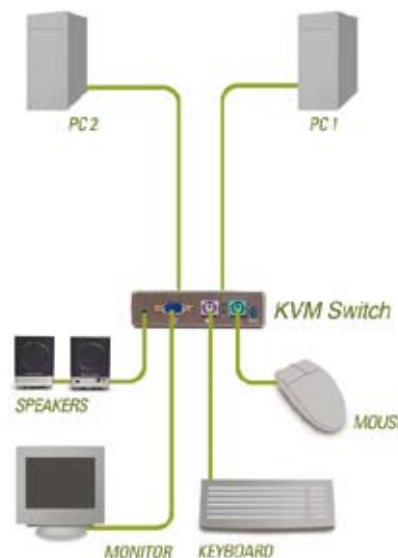
- 2 KVM Ports
- PS/2 Keyboard & Mouse Support
- Audio Socket to Connect to Audio Device
- 2 Sets of KVM Cables Attached to KVM Switch

### KVM-221

#### 2-Port USB KVM Switch



- 2 KVM Ports
- Audio Socket to Connect to Audio Device
- USB Keyboard & Mouse Support
- 2 Sets of KVM with Audio Cables Attached to KVM Switch



### DKVM-2KU

#### 2-Port KVM Switch with USB Port



- 2 KVM Ports
- 1 USB 2.0 Port to Share USB Device between 2 Connected PCs
- PS/2 Keyboard & Mouse Support
- 2 Sets of KVM Cables Attached to KVM Switch

## DKVM-2U

### 2-Port USB KVM Switch



- 2 KVM Ports
- USB Keyboard & Mouse Support
- 2 Sets of KVM Cables Attached to KVM Switch

## DKVM-4U

### 4-Port USB KVM Switch



- 4 KVM Ports
- USB Keyboard & Mouse Support
- 2 Sets of KVM Cables Provided

## DKVM-16

### 16-Port KVM Stackable Switch



- 16 KVM Ports
- Stackable to 8 Units per Stack
- Stackable With 8-Port DKVM-8E Switch
- 19-Inch Equipment Rack-Mountable
- PS/2 Keyboard & Mouse Support
- 2 Sets of KVM Cable Provided
- 1 Set of KVM Stacking Cable Provided
- External Power Adapter

## DKVM-4K

### 4-Port KVM Switch



- 4 KVM Ports
- PS/2 Keyboard & Mouse Support
- 2 Sets of KVM Cables Provided

## DKVM-8E

### 8-Port KVM Stackable Switch



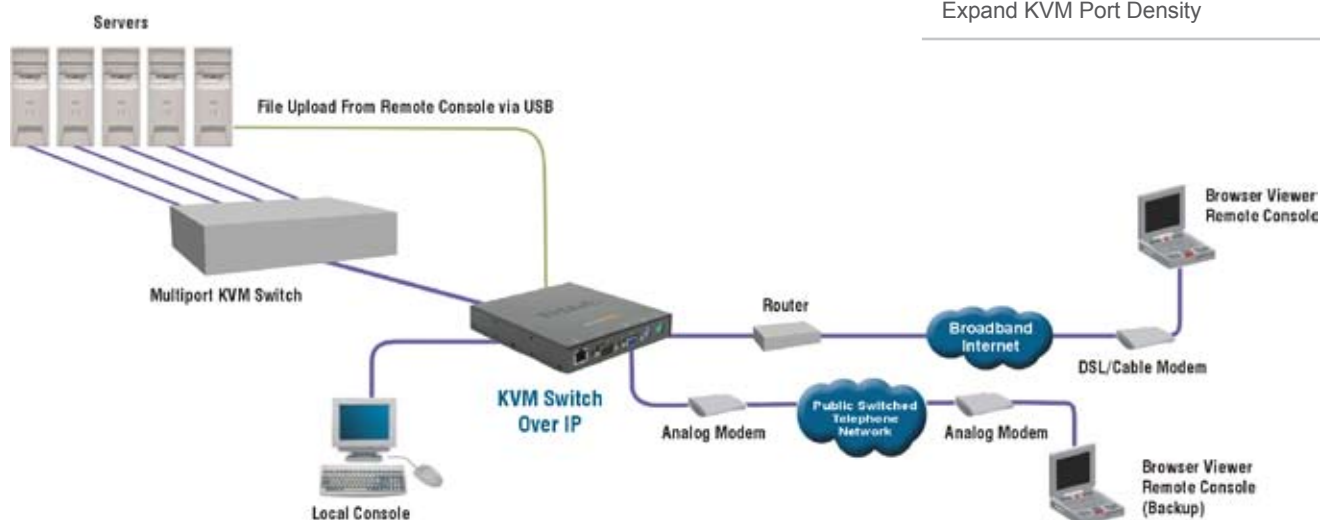
- 8 KVM Ports
- Stackable to 8 Units per Stack
- Stackable With 16-Port DKVM-16 Switches
- 19-Inch Equipment Rack-Mountable
- PS/2 Keyboard & Mouse Support
- 2 Sets of KVM Cable Provided
- 1 Set of m KVM Stacking Cable Provided
- External Power Adapter

## DKVM-IP1

### 1-Port KVM Switch Over IP



- For Remote Control of Servers
- 1 KVM Port Connection to Server
- Ethernet Port for LAN or Internet Connection
- RS-232 Modem Port for Backup
- PS/2 Keyboard & Mouse Support
- USB 2.0 Port for Remote Connection to Server Hard Disk
- 256-Bit SSL Encryption for Data Encryption over Internet
- Can Connect to Other KVM Switches to Expand KVM Port Density



Remote Access to Servers Through KVM Over IP

## Features & Benefits

- **Multi-Function Equipment Support**
  - » Multifunction printers are equipment with printing, scanning and faxing functions.
  - » Scanning support allows users to use these printers to scan documents and send the output files to a user computer or server.
  - » Faxing support allows users to send fax message from a workstation to the printer for transmission.
- **IPP (Internet Printing Protocol) Support**
  - » IP address can be set in a print server for remote users to output print files to the printer from a remote place.
- **HP PJL Bi-directional Printer Communication Protocol Support (for Parallel Printer Ports)**
  - » Using this protocol, a print server can collect information and report the status of the attached printer.
- **User Access Control**
  - » Useful for office environments and multi-port printers; this function allows the network administrator to set access to the printer.
- **Windows-Based Administration Program**
  - » Easy setup and management of print jobs.
- **Built-in MIB**
  - » Print servers can be managed in an SNMP environment.

The print servers allow users to share printers over the network through simple, transparent printing operation. Tested with a wide range of different printer models, D-Link print servers offer a high level of compatibility. They support multiple network Operating Systems, including Windows, Mac OS and Linux, giving users the flexibility of installing their print servers regardless of the network environment.

The single-port print servers are cost-effective for both large offices and small workgroups. For homes and the small office with just one printer to share, these single-port devices save costs. For large offices with many printers scattered at different places, users can plug a single-port print server to each of these printers and share them on the network.

The multi-port print servers have a number of printer ports, so users don't need to install a separate print server for each printer that they want to share. Where printers are closely placed together, it makes sense to buy a print server that offers multiple printer ports. Each of the printers can be attached to a port of the same print server through a printer cable. Multi-port print servers are equipped with powerful CPU and abundant RAM buffers, so even when all printers are printing at the same time, users will not experience any degradation of performance.

The multifunction print servers allow users to take advantage of the scanning and fax functions of the multifunction printers. These print servers will take care of sending output scanned files to specified network destinations. Fax messages from users' computers can also be sent to the print server for transmission from the printer.

### DP-301P+

#### Single-Port Parallel Print Server



- Parallel Printer Port
- Connects to Network through 10/100BASE-TX Port
- IPP Remote Printing
- User Access Control
- Supports Windows, Mac OS, Unix
- Directly Connects to Printer's Parallel Port, No Printer Cable Required

### DP-301U

#### Single-Port USB Print Server



- USB 2.0 Port
- Connects to Network through 10/100BASE-TX Port
- IPP Remote Printing
- Supports Windows, Mac OS, Unix, NetWare

## DP-G310

### *Single-Port Wireless G USB Print Server*



- USB 2.0 Port
- 10/100BASE-TX Ethernet and 802.11g Wireless Network Connection
- IPP Remote Printing
- User Access Control
- Web-Based Configuration
- Supports Windows, Mac OS, NetWare, Linux, Unix

## DP-G321

### *3-Port Wireless G Print Server*



- 2 USB 2.0 Ports, 1 Parallel Printer Port
- 10/100BASE-TX Ethernet and 802.11g Wireless Network Connection
- IPP Remote Printing
- User Access Control
- Supports Windows, Mac OS, NetWare, Linux, Unix

## DP-300U

### *3-Port Print Server*



- 1 USB 2.0 Port, 2 Parallel Printer Ports
- 10/100BASE-TX Ethernet Network Port
- Supports Windows, Mac OS, Linux, Unix, NetWare

## DPR-1260

### *4-Port Wireless 108G USB Print Server*



- 4 USB 2.0 Ports
- 802.11g Wireless Speed Up to 108Mbps
- 10/100BASE-TX Ethernet Port
- Ethernet Port Can Also Act as Bridge Port for Wireless LAN
- Supports Scanning Function of Multi-Function Equipment
- Supports Windows

## DP-300+

### *3-Port Print Server*



- 1 Serial Port, 2 Parallel Printer Ports
- 10/100BASE-TX Ethernet Network Port
- IPP Remote Printing
- User Access Control
- Supports Windows, Mac OS, Unix

## DPR-1061

### *3-Port Print Server*



- 2 USB 2.0 Ports, 1 Parallel Printer Port
- 10/100BASE-TX Ethernet Port
- Supports Scanning and Fax Functions of Multi-Function Equipment
- Supports GDI Printers
- Supports Windows

## Features & Benefits

### • Digital Zoom

- » Using the zoom function provided by the surveillance software running on a PC, viewers can zoom up captured video 4 times for display of details

### • Optical Zoom Auto Focus/Auto Iris Lens

- » Viewers can zoom up captured video 18 times for clarity far greater than digital zooms alone.
- » Higher level of details necessary to identify people, license plate numbers, etc.

### • 3GPP Support

- » Live camera feed of camera can be pulled from a 3G cellular network using a cell phone or PDA with 3G video player.
- » From anywhere within a 3GPP service area, users can monitor a home or office in real time while walking or driving.

### • Motion Detection Recording

- » Instead of recording 24 hours a day, 7 days a week, images can be recorded to a computer hard drive only when motions are detected.
- » Saves disk space, eliminates time wasted to view unnecessary images.

### • Recording to NAS

- » Video and sound can be recorded directly to a Network Attached Storage (NAS) such as an external hard drive connected to an Ethernet or 802.11 wireless network.
- » No need to turn on the power of a PC 24 hours a day for standby recording.

### • Triggered Event Browsing

- » Playback of recorded video consumes little time using fast database searching.

### • Multiple Camera Site Display on Single Screen

- » Viewing of up to 32 camera sites on a single computer or TV screen at one central location.
- » Viewer can select any of the displayed camera site and zoom up the captured video.

### • UPnP Support

- » Computers running Windows can automatically recognize all installed cameras and add them to the network.
- » Cameras can be accessed and viewed from any network place as a device on the network.

The Internet cameras let users watch and listen remotely from anywhere. They connect to an Ethernet wired and wireless network at home, in a building, factory or campus, and via broadband to the Internet. Equipped with versatile features such as video zoom, low-light image capture, audio/video recording and multi-camera monitoring, these cameras provide a comprehensive security system for surveillance of home and business premises.

The cameras are designed as stand-alone systems complete with CPU and integrated web servers, and do not need to hook up to any computers. Once connected to the network, users can use the IP address built inside the camera to access it and view live streaming video.

D-ViewCam 2.0 surveillance software is provided to let users to set up parameters, configure and manage the cameras. It also lets users view multiple cameras on a single computer or TV screen at a central location. Images can be recorded to the computer's hard drive. The cameras can be connected to external alarms and sensors, and users can set up automatic e-mail alerts that are sent through the Internet.

The Internet camera supports motion-detected recording to save disk space and eliminate the time otherwise wasted to view the entire record. Image playback consumes little time with triggered-event browsing and fast database searching.

The Pan/Tilt/Zoom (PTZ) Internet cameras provide angle movement and zoom controllable from a web interface for monitoring of all angles with closed up details. Using the 2-way audio Internet cameras, users can view and listen from a remote place while talking to a person at the camera site through a speaker attached to the camera.

The day-and-night Internet cameras are equipped with high-quality CCD sensors, low-light and no light capabilities for capture of sharp video in any environment. Accessories such as illuminators, optical auto-IRIS lens and LED lens can be attached to these cameras for use at night.

With the alarm-triggered global reaction function, the camera software can send alarms to the system to trigger other cameras and security equipment to react in a global manner. The cameras supporting Power over Ethernet can be placed on high ceilings or in hidden places where AC outlets are not available.























### • DDNS Support

- » Users can assign an easy-to-remember name and domain to the camera.
- » Can remote access the camera without having to remember its IP address, even if the Internet Service Provider has changed it.

### • Power over Ethernet Support

- » Camera can be placed on a ceiling or roof and connect to a 802.3af Ethernet switch; no need to connect to an AC power source, no need to run power cable.
- » No need for AC power adapter; camera can be easily concealed or camouflaged.

# Internet Cameras

																				
Hardware Features	DCS-910	DCS-920	DCS-2102	DCS-2120	DCS-2121	DCS-3110	DCS-3410	DCS-3415	DCS-3420	DCS-5220	DCS-5230	DCS-5300	DCS-5300G	DCS-5610	DCS-6110	DCS-6410	DCS-6620	DCS-6620G	DCS-7410	DCS-7411
Sensor	CMOS	CMOS	Megapixel CMOS	CMOS	Megapixel CMOS	Megapixel CMOS	CCD	CCD	CCD	CMOS	Megapixel CMOS	CCD	CCD	CCD	CMOS	CCD	CCD	CCD	CCD	CCD
Lens Type	Fixed	Fixed	Fixed	Fixed	Fixed	C/CS Mounted	C/CS Mounted	Fixed	C/CS Mounted	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Day/Night Lens	—	—	—	—	—	Option	Option	—	Option	—	—	—	—	—	—	—	—	—	IR Built-in (25M)	IR Built-in (40M)
Auto IRIS Lens	—	—	—	—	—	Option	Option	—	Option	—	—	—	—	—	—	—	—	—	—	—
Optical Zoom	—	—	—	—	—	—	—	18X	—	—	—	—	—	2.6X	—	—	10X	10X	—	Manual 3X
Microphone	—	—	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in	—	Built-in	Built-in	Built-in	Built-in	—
Audio In	—	—	—	—	—	✓	✓	✓	✓	—	—	—	—	—	—	✓	✓	✓	✓	✓
Audio Out	—	—	✓	—	✓	✓	✓	✓	✓	—	✓	✓	✓	✓	—	✓	✓	✓	✓	✓
Wireless LAN	—	802.11g	—	802.11g	802.11g	—	—	802.11g	802.11g	802.11n	—	—	802.11g	—	—	—	802.11g	—	—	—
Sensor I/O Interfaces	—	—	—	—	—	✓	✓	✓	✓	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
TV Output	—	—	—	—	—	—	BNC	—	BNC	—	—	AV	AV	AV	—	BNC	AV	AV	BNC	BNC
Remote Control	—	—	—	—	—	—	—	—	—	—	—	✓	✓	—	—	—	✓	✓	—	—
Motorized Pan/Tilt	—	—	—	—	—	—	—	—	—	—	✓	✓	✓	✓	—	—	✓	✓	—	—
RS-485 Interface	—	—	—	—	—	✓	✓	✓	—	—	—	—	—	—	—	—	—	—	✓	✓
802.3af PoE	—	—	—	—	—	✓	✓	✓	—	—	—	—	—	✓	✓	✓	—	—	✓	✓
Input Power	5VDC/2.5A	5VDC/2.5A	5VDC/2.5A	5VDC/2.5A	5VDC/2.5A	12VDC/1.25A	12VDC/1.25A	12VDC/1.25A	12VDC/1.5A	12VDC/1.5A	12VDC/1.25A	12VDC/1.5A	12VDC/1.5A	12VDC/1.5A	12VDC/1.25A	12VDC/1.25A	12VDC/1.5A	12VDC/1.5A	12VDC/1.25A	12VDC/1.25A
IP66 Water/Dust Proof	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	✓	✓
Software Features																				
MJPEG Video Format	✓	✓	✓	—	✓	✓	✓	✓	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MPEG4 Video Format	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Max. Frame Rate	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps	30fps
Digital Zoom	—	—	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	10X	10X	4X	4X
Java Support	✓	✓	✓	—	✓	✓	✓	—	—	✓	—	—	—	✓	✓	✓	—	—	✓	✓
Motion Detection	*	*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E-mail Notification	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Schedule Recording to Hard Drive	—	✓	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Recording to NAS	—	—	✓	—	✓	✓	✓	✓	—	✓	✓	—	—	✓	✓	—	—	—	✓	✓
Audio Recording	—	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Video Output to 3GPP	—	—	✓	✓	✓	✓	✓	—	✓	✓	✓	—	—	✓	—	✓	—	—	✓	✓
Max. Cameras Displayable on PC/TV Screen	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
UPnP Installation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DDNS Support	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Enable/Disable LED Indicators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\* Motion detection available through software

## Features & Benefits

- IR Illuminators & IR Lens / Vari-focal Lens Useful for Diverse Applications
- Certified for Water Resistance/ Dust-Proof Protection
- Outdoor Enclosure with Built-in Heater/Blower for Protection against Heat/Cold Temperature
- Power Supply Built Into Outdoor Enclosure for Easy Cable Management
- Angle-Adjustable Mounting Brackets
- Vertical or Horizontal Installation

D-Link's SecuriCam IP camera accessories let users protect homes and businesses by maximizing the full potential of the D-Link Internet cameras. They provide cost-effective solutions for diversity of application. The IR illuminator and IR lens can be used for both day and night surveillance, while the vari-focal CS mount lens provides easy installation without the need to change the lens for particular applications.

The Internet camera outdoor enclosures protect the Internet camera from the rigors of outdoor use. These fixed-type enclosures include heavy-duty, angle-adjustable mounting brackets that can be used to secure the camera on a vertical or horizontal surface. These enclosures maximize the full potential of the Internet cameras to secure and protect homes and business buildings.

### DCS-10

#### *IR Illuminator*



- 20 x IR-LEDs
- Night vision illumination: up to 10 m Distance
- IP68 Certified for Water Resistance and Dust-Proof Operation
- Power On Auto-control Under 10 lux
- Dimensions: 50 (O) x 60 (D) mm
- For Use with DCS-3110, DCS-3410, DCS-3420 Cameras

### DCS-20

#### *IR Lens*



- CS-Mounted IR Fixed Lens
- 12 x 850nm Infrared LEDs
- Focus Length: F6.0 / F2.0, up to 10 m Distance
- Power On Auto-control Under 10 lux
- Dimensions: 58.6 (O) x 24 (D) mm
- For Use with DCS-3110, DCS-3410, DCS-3420 Cameras



## DCS-25

### *Vari-focal Lens*



- CS-Mounted Vari-focal Auto Iris Lens
- For 1/3-inch & 1/4-inch Sensors with IR Connection
- Focus Length: F3.5 - 8.0mm / F1.4 to 360
- Iris/Focus Control: DC Drive & Manual Focus
- View Angle: 95 to 42 Degrees
- Dimensions: 36 (O) x 52.3 (D) mm
- For Use with DCS-3110, DCS-3410, DCS-3420 Cameras

## DCS-60

### *Outdoor Enclosure*



- IP44 Certified for Water Resistance and Dust-Proof Operation
- Integrated Heater and Blower for Camera to Operate in Wider Range of Temperature
- Built-In Power Supply to Simplify Installation
- Aluminum Housing
- For Use with DCS-3110, DCS-3220, DCS-3410, DCS-3420 Cameras

## DCS-45

### *Outdoor Enclosure*



- Thermal Barrier Design to Withstand Temperature Fluctuations
- With Flip Open Top for Easy Installation
- Aluminum Housing with Steel Bracket
- For Use with DCS-3110, DCS-3220, DCS-3410, DCS-3420 Cameras

## DCS-50

### *Outdoor Enclosure*



- IP66 Certified for Water Resistance and Dust-Proof Operation
- Built-In Power Supply to Simplify Installation
- Aluminum Housing
- For Use with DCS-3110, DCS-3220, DCS-3410, DCS-3420 Cameras

## DCS-70

### *Outdoor Enclosure*



- IP66 Certified for Water Resistance and Dust-Proof Operation
- Dome Type Enclosure
- Integrated Heater and Blower for Camera to Operate in Wider Range of Temperature
- Built-In Power Supply to Simplify Installation
- Aluminum Housing with Smoked Acrylic Cover
- For Use with PTZ Cameras

## Features & Benefits

- **Layer 3 Utilities**
  - » Include IP forwarding, RIP 2, OSPF, IP MRoute, DVMRP and PIM functions for management switches and advanced routers in enterprise networks.
- **Topology Generator**
  - » Creates detailed diagrams and schematics for network design and layout planning.
- **SNMP v3 Support**
  - » For major MIBs including MIB II, IF- MIB (RFC2233), Entity MIB (RFC2737), Bridge 802.1D(RFC1493), RMON, 802.1P (RFC2674) and 802.1Q (RFC2674).
- **Trap Events**
  - » Trap/Alarm notification by e-mail and sound.
  - » Notifications based on severity.
  - » Customizable trap messages.
- **Domain Management**
  - » Allows administrators to categorize network devices into single or multiple domains.
- **Multiple Views**
  - » Supports tree and list views for viewing devices in the domain.
- **Resource Management**
  - » Manage, add, or remove network device resources from/to a topology.
- **Device Customization**
  - » Include customized network devices by manually entering device type information.
- **MIB Compiler**
  - » Powerful, easy-to-use MIB Compiler and Browser for more effective and efficient network management
  - » Manage third-party devices.
- **Client-Server Architecture**
  - » For Professional version only.
- **Batch Configuration**
  - » For both Standard and Professional versions.

D-View 6.0 SNMP Network Management System is a comprehensive standards-based management tool designed to centrally manage critical network characteristics such as availability, reliability, resilience and security in a consistent way. Flexible and versatile, this software accommodates a wide range of D-Link devices, including wireless bridges and access points, multi-layer switches, remote routers, OLT/ONU devices and broadband CO devices. D-View provides useful tools to allow network administrators to effectively manage device configurations, fault tolerance, performance and security.

D-View is organized into a vendor-independent platform and user plug-in modules. The platform consists of several main components, namely the Domain Manager, NetMap Manager, Topology Generator, Batch Configuration, MIB utilities, Net Toolbox and Performance Monitor. The components can be loaded or unloaded according to the users' need. Plug-in modules are for the D-Link devices that the administrators want to manage. When a device is selected for management, D-View will look for that device's plug-in module and display its image on the screen.

Users can create a topology map to graphically represent planned or existing networks to aid network design. D-View periodically polls network devices to monitor the status. Users can customize their diagrams with selected icons and bitmap files used for the background. When a topology map is opened, D-View will discover the devices connected on the network and display their icons on the map. D-View 6.0 can recognize a device's standard (SNMP or non-SNMP), its type (router, switch or wireless LAN) and its network domain. The protocols used in polling for device discovery are SNMP and ICMP. For remote network devices, traps are sent to them to obtain status information.

Users can also manage non-D-Link devices that do not have plug-in modules. D-View provides a MIB compiler for users to compile MIB files supplied by the vendors of these devices into a system recognizable format. After compilation, D-View loads them into the database. The compiler can communicate with these devices, enabling the administrator to get the values currently stored in the devices or to set new values for specific MIB objects. All MIBs are converted into a graphic tree view, with which the administrator can use the MIB Browser to manage the devices. As non-D-Link devices do not have plug-in modules for installation in D-View, this software can simulate the device panels to create user interface graphics.

### DV-600P

*D-View 6.0 Professional Version*



- SNMP Network Management Software
- Supports Client-Server Architecture

### DV-600S

*D-View 6.0 Standard Version*



- SNMP Network Management Software

## Features & Benefits

### • Real-Time Face-to-Face Video Conference

- » Watch live video and see friends' faces while talking over the Internet.

### • Quality Audio/Video

- » Video display at up to 30 frames per second at 352 x 288 pixels (CIF) or 176 x 144 pixels (QCIF).
- » Speakerphone with jitter buffer, echo cancellation and comfort noise generation to match or surpass normal phone quality.

### • TV Connection

- » Videophones without LCD screen connect to living room TV sets to display video.
- » Videophones with integrated LCD can connect to TV too for large screen display.
- » Callers can get full screen view or picture-in-picture view.
- » PAL or NTSC TV format support (factory set).

### • Remote Control

- » Answer incoming videophone calls and initiate new ones from TV screen.
- » View caller ID on TV screen
- » View auto-IP-mapping phone book and select number (caller IP address) on TV screen.
- » Adjust remote view or self view.

### • External Speaker Connection

- » Can use built-in speaker or external speakers for better sound.

### • Quality of Service (QoS) Support

- » Prioritized Internet traffic handling for smooth image and voice transmission/reception.

### • Convenient PSTN and Internet Phone

- » Default connection is to normal telephone (PSTN) when the phone is picked up to dial out.
- » Users press "Broadband" button and select destination from Speed-Dial List to initiate a video conference call.
- » Videophones accept both PSTN and VoIP incoming calls

### • Integrated Wi-Fi Interface

- » Callers can sit anywhere at home or in the office and talk on the phone.
- » TV does not need to be placed near the phone line or DSL modem.

These video phones are unique appliances from D-Link that combine voice and video transmission/reception over the broadband Internet. These phones integrate CMOS cameras into them to capture and send speakers' faces to the opposite sides, so callers can watch each other's actions while talking.

Designed for home and office use, these appliances provide a low-cost video conference solution that operates without the need for any computer hardware and software. At two remote places, users simply plug two videophones to the Internet to talk face-to-face anywhere in the world.

D-Link videophones use the industry-standard H.323 protocol for video streaming over the Internet. They can connect to any devices that use this standard for video conferencing, and not just to other D-Link videophones. For face-to-face talks, users can also connect D-Link videophones to other devices that use the popular Microsoft web-based NetMeeting.



## DVC-1000

### Videophone



- Connects to TV Set
- Connects to DSL/Cable Modem Through Ethernet Port

## DVC-1100

### Wireless G Videophone



- Connects to TV Set
- Connects to DSL/Cable Modem or Broadband Router Through Ethernet Port or Integrated 802.11g Wireless LAN

## DVC-2000

### Desktop Videophone



- Integrated 5-Inch Color TFT LCD
- Connects to DSL/Cable Modem Through Ethernet Port
- Can Connect to TV Set Through Video Out Interface

## DVC-10

### Wide Angle Focal Lens



- 75° Diagonal Field of View for Wider Coverage
- High Quality Glass Lens Elements
- 2.9mm Focal Length
- 5.5mm Back Focal Length
- 63° Horizontal, 50° Vertical
- For Use With DVC-1000, DVC-1100 Video Phones

## DVC-20

### Varifocal Lens



- Wide Angle View for Wider Coverage or "Zoom In" View for a Close-Up
- High Quality Glass Lens Elements
- 2 x 4-8mm Focal Lens
- 66° to 63° Horizontal, 38° to 20° Vertical, 66° to 33° Diagonal
- For Use With DVC-1000, DVC-1100 Video Phones

## Features & Benefits

- **Embedded Centralized Storage Management**
  - » Embedded IP-SAN Device Manager (IDM) allows monitoring and control of SAN via SMI-S (Storage Management Initiative) command set.
  - » Embedded secure server for remote configuration/monitoring of SAN storage subsystems.
- **Advanced Management Features**
  - » Additional advanced features for efficient management of network storage and optimal performance.
- **Adaptive/Persistent Cache Management**
  - » Provides write-back, write-through, write coalescing, multi-stream read-ahead on a volume basis.
  - » Optimizes cache utilization and performance in an application dependent manner.
- **VLAN Zoning**
  - » 802.1Q VLAN tagging to segregate traffic into isolated zones for secure access.
  - » Jumbo frames to improve network throughput/reduce CPU overhead.
- **QoS**
  - » 802.1p Priority Queues for time-sensitive packets.
- **Volume Virtualization**
  - » Storage management software stack for volume virtualization utilizing concept of storage extents.
  - » Fundamental building blocks to enable RAID, online capacity expansion, volume migration.
  - » Drives of dissimilar sizes can be used to create volumes.
  - » Growth can occur without volume migration or reconstruction.
  - » Single drives can contain multiple and divergent RAID technologies.
  - » Volume structure can provide infrastructure for Snapshot copies.
- **RAID Support**
  - » RAID Levels 0, 1, 1+0, 5 and JBOD (striped sets, mirrored sets, striped mirrored sets, parity sets and JBOD)

These Storage Area Networks (SANs) are designed to provide a reliable network data storage solution for customers in entry-level and SMB segments. Utilizing a 10-Gigabit iSCSI System-on-a-Chip (SoC) solution that can handle over 65,000 I/Os per second and capable of supporting over 11TB raw capacity using high-capacity hard drives, these SANs can easily be implemented as near line storage to supplement primary IP network storage solution or be used as a basic backup and recovery device. This evolutionary advancement in performance is a testament to the tightly integrated xStack Storage architecture and is a sharp contrast to the discrete implementation of competing products.

SAN has been traditionally reserved for Fiber Channel networks until the recent introduction of iSCSI that extends this powerful yet simple centralized backend (behind server-based) storage system to IP networks. By utilizing existing Ethernet technology, the cost associated with separate host bus adapters and the per-Gigabyte cost for storage is significantly reduced. IP SAN based on iSCSI technology can leverage existing and familiar Ethernet standards to provide speeds of up to 1160MBytes bandwidth.

D-Link SAN Array implements multiple Gigabit ports and supports IEEE 802.3ad Link Aggregation Groups (LAG) for full offload capability so that multiple ports can be grouped together for increased throughput and redundancy.

D-Link SANs also provide the industry's first built-in, fully integrated 10-Gigabit interface, providing up to 1160MBytes bandwidth and a high performance alternative to the multi-Gigabit Fiber Channel.

By utilizing a SoC design, D-Link SANs combine both networking and storage functions into a single specialized Application Specific Integrated Circuit (ASIC). The SoC solution combines 10-Gigabit iSCSI, TCP & IP offload, embedded processors, and a storage virtualization firmware stack onto a single chip. The tight integration of these functions eliminate interoperability, timing, and support issues found in competitive products that offer "discrete implementation" wherein a chassis, a main motherboard, a RAID storage controller, iSCSI software or controller, network interface cards, and operating system software are picked separately and then assembled. D-Link SANs outperform these discrete implementations and do so at a lower price point. They also deliver mission critical data quickly with state-of-the-art reliability.

The SAN platform features 15 hot swappable Serial ATA (SATA) disk drive bays supporting over 11TB raw capacity using 750GB hard drives (and even higher capacity hard drives as they are introduced) in RAID level 0, 1, 1+0 and 5 configurations. Users can quickly deploy a SAN using inexpensive SATA disk drives and depending on their growing storage needs, they can simply add more drives.

### Recommended Hard Drives

The Seagate Barracuda ES family of enterprise class SATA hard drives provides high performance with very high reliability for business critical applications.

<b>ST3250620NS</b>	<b>250GB</b>
<b>ST3400620NS</b>	<b>400GB</b>
<b>ST3500630NS</b>	<b>500GB</b>
<b>ST3750640NS</b>	<b>750GB</b>



### Micro Rebuilds

- » Protection against unresponsive SATA commands by forcing a response within a preset time limit.

### Online Capacity Expansion and RAID Level Migration

- » Volumes can be expanded and/or migrated to other RAID levels while online and with minimal impact on users. For example, a mirror volume of two drives can easily be converted to a parity volume of three or more drives while users continue to access this storage.

## DSN-2100

### *Gigabit iSCSI SAN Array*



- Entry-Level Nearline Storage Solution
- Integrated iSCSI System-on-a-Chip (SoC)
- 4 10/100/1000BASE-T Ports
- 8 Drive Bays
- Over 6TB Capacity with 750GB Hard Drives
- Embedded Disk Controller Supporting RAID Levels 0, 1, 1+0, 5 & JBOD
- Up to 425MB Bandwidth
- 256MB to 4GB (256MB Standard) Cache Memory
- 72 hrs Full Charge Battery Backup for Cache
- Can Be Used as Replacement of Direct-Attached Storage (DAS) Drives

## DSN-3400

### *10-Gigabit iSCSI SAN Array*



- Fiber Nearline Storage Solution
- Integrated iSCSI System-on-a-Chip (SoC)
- 1 10-Gigabit Port
- 15 Drive Bays
- Over 11TB Capacity with 750GB Hard Drives
- Embedded Disk Controller Supporting RAID Levels 0, 1, 1+0, 5 & JBOD
- Up to 1,160Mbytes Bandwidth
- 256MB to 4GB (256MB Standard) Cache Memory
- 72 hrs Full Charge Battery Backup for Cache

## DSN-3200

### *Gigabit iSCSI SAN Array*



- Mid-Range Nearline Storage Solution
- Integrated iSCSI System-on-a-Chip (SoC)
- 8 10/100/1000BASE-T Ports
- 15 Drive Bays
- Over 11TB Capacity with 750GB Hard Drives
- Embedded Disk Controller Supporting RAID Levels 0, 1, 1+0, 5 & JBOD
- Up to 850MB Bandwidth
- 256MB to 4GB (256MB Standard) Cache Memory
- 72 hrs Full Charge Battery Backup for Cache



## Features & Benefits

- **Network File Sharing**
  - » Share documents, music, photos, videos across home/office network or on Internet.
  - » Create central network point for backing up valuable files.
- **Compact Size & Low Cost**
  - » Much smaller desktop size than PC-based servers.
  - » Can be deployed at a fraction of the cost of a PC-based server.
- **Ready for Operation**
  - » Integrated OS software, no need to purchase and install separate software.
  - » Transparent multi-platform file sharing is easily accessible at system power-on.
- **UPnP AV Compatible**
  - » Stream music, photos and video to UPnP AV compatible network media players.
- **Built-in iTunes and FTP Server**
  - » Access stored music, video and other files locally or over the Internet.
- **High Speed Access**
  - » For SATA network storage, RAID 0 combines both drives in a "striped" configuration, enabling speeds up to 23Mbps read, 15Mbps write.
  - » Gigabit connection can increase these speeds to 184Mbps read, 120Mbps write.
- **Flexible Drive Modes for SATA Drives**
  - » Standard mode to create 2 separately accessible hard drives.
  - » JBOD mode combines both drives for maximum space efficiency.
  - » RAID 0 combines both drives in "striped" configuration for highest performance.
  - » RAID 1 provides redundancy drive backup.
- **Power Management**
  - » Helps conserve energy and extend hard drive life
- **Real-Time Backup**
  - » Instant protection of storage data without the need to manually back up files and folders.
- **User Access Control**
  - » Administrators can set up different storage permissions for different users and groups

These Network Attached Storage (NAS) are compact storage devices that can be easily connect to a home or office network, or to the Internet. Ideal for disk and file sharing, these devices provide the hardware reliability and interoperability with major operating systems. They come with embedded software for ready file access that saves users the cost of buying separate OS software and the trouble of installing it.

### DNS-313

#### 1-Bay Network Storage Enclosure



- 1 Open Bay for 3.5-Inch SATA Hard Drive
- USB 2.0 Port for PC Connection
- 10/100/1000BASE-T Gigabit Network Connection
- Built-in iTunes and FTP Servers
- Operates in Windows Environment
- Can Be Used as a Network Attached Storage (NAS) or a Portable Hard Drive (DAS) Directly Attachable to PC USB Port

### DNS-321

#### 2-Bay Network Storage Enclosure



- 2 Open Bays for 3.5-Inch SATA Hard Drives
- 10/100/1000BASE-T Gigabit Network Connection
- Built-in FTP Server
- Supports Standard, JBOD, RAID 0, RAID 1 Drive Modes
- Operable in Windows, Mac OS and Linux Environments

### DNS-323

#### 2-Bay Network Storage Enclosure



- 2 Open Bays for 3.5-Inch SATA Hard Drives
- USB 2.0 Print Server Port
- 10/100/1000BASE-T Gigabit Network Connection
- Built-in FTP Server
- Supports Standard, JBOD, RAID 0, RAID 1 Drive Modes
- Operable in Windows, Mac OS and Linux Environments

### DNS-343

#### 4-Bay Network Storage Enclosure



- 4 Open Bays for 3.5-Inch SATA Hard Drives
- USB 2.0 Port for Printer and UPS Connection
- 10/100/1000BASE-T Gigabit Network Connection
- OLED Display Screen
- Built-in FTP Server
- Supports Standard, JBOD, RAID 0, RAID 1, RAID 5 Drive Modes
- Operable in Windows, Mac OS and Linux Environments

## Features & Benefits

- Latest V.92 Standard Compliance
- Hardware Modems With On-Board Components to Offload Host PC's Communication Tasks
- Low-Cost Software Modems for PC With Faster Processors
- Bundled BVRP Fax Software to Send/Receive Fax

Supporting line speeds of up to 56Kbps (receive rates) and 48Kbps (transmit rates), the analog modems connect into the phone line to establish a dial-up Internet link. These low-cost dial-up modems allows home users to surf the Internet or access e-mail without the need for DSL, cable modem or ISDN subscriptions.

Complying with industry standards, the analog modems perform data compression and error correction for fast and reliable transmission/reception. In addition to Internet connection, these modems also support fax transfer, with transmission/reception rates of up to 14.4Kbps.

### DFM-562I

#### Analog Modem PCI Adapter



- V.92/V.90 Standards
- MIC Microphone & Speaker Jacks for Loud Speaker Connection
- 2 RJ-11 Phone Jacks (to Phone Line & Phone Set)
- Supports Windows

### DFM-562IS

#### Analog Modem PCI Adapter



- Software Modem
- V.92/V.90 Standards
- 2 RJ-11 Phone Jacks (to Phone Line & Phone Set)
- Supports Windows

### DFM-560EL

#### Analog Modem



- V.90 Standard
- RS-232 Serial Interface to PC
- Supports Windows
- Powered Through External Power Adapter

### DFM-562E

#### Analog Modem



- V.92/V.90 Standards
- RS-232 Serial Interface to PC
- MIC Microphone & Speaker Jacks for Voice
- Supports Windows
- Powered Through External Power Adapter

### DU-562M

#### USB Analog Modem



- Software Modem
- V.92/V.90 Standards
- USB Interface to PC
- Supports Telephone Answering Machine (TAM)
- Supports Windows
- USB Bus Power, No External Power Supply Required



## Features & Benefits

### • Streaming Multimedia to Home Entertainment Center

- » Stream Media Content from PC or Network Storage to Entertainment Center
- » Listen to Digital Music on Stereo System
- » View Digital Photos, Slideshows, Video on TV
- » Integrated 802.11g Wireless Connection
- » Can Connect Through Ethernet Interface
- » Enjoy MP3 music, digital photos and video footages in the comfort of the living room.

### • TV Screen Menu Selection via Remote Control

- » Users select file folders and file types (JPEG, MPEG-4, etc.) in PC hard drive to share; Media Player adds them to its on-screen menu
- » Use remote control to select and play.

### • Transparent Operation

- » All file/folder sharing and streaming take place behind the scene.
- » Family members can work on programs on computer while others are watching digital video on TV screen.

### • High-Definition Multimedia Interface (HDMI)

- » Connect to High-Definition TV for pure sound and images of up to 1080i resolution.

### • Supported Audio Formats

- » MP3 (up to 320kps)
- » WMA (PCM only)
- » AIFF
- » WAV
- » Ogg Vorbis

### • Audio/Image/Video

- » MP3 (Up to 320Kbps)
- » WAV & AIFF (PCM only)
- » WMA
- » Ogg Vorbis JPEG (Grayscale, RGB, YCbCr only)
- » JPEG 2000
- » BMP

### • Supported Image Formats

- » JPEG (Grayscale, RGB, YCbCr only)
- » BMP (non-compressed)
- » PNG
- » TIFF (RGB only)
- » JPEG 2000
- » GIF

The Network Media Players unite a home network with the home entertainment center, allowing users to share, access, and enjoy digital multimedia in the comfort of the living room. They connect to the TV and let users access digital media content stored on the PC or a network attached storage, browse music files, watch videos and view digital photos. They also allow users to access on-line media contents on the TV through a home broadband Internet connection. Users can listen to high-quality digital music on a stereo system, share digital photos with friends and family, and watch their favorite high-definition digital videos on a TV screen.

The Network Media Players support high-definition video in Windows Media Video 9 (WMV9), MPEG-2, MPEG-4, DivX® and DVR-MS formats. Users can enjoy videos with resolutions up to 720p/1080i for the best picture quality from HDTV using an HDMI connection, or connect to standard televisions using SCART or Composite Video cables. Certain models (the DSM-510, for example) are DivX Certified, allowing users to play DivX encoded movies (DivX format compressed video files) with exceptionally high visual quality.

The Audio Adapters connect to flash drives, PC or hard drives to play digital sound. They come with convenient remote control and can connect wirelessly to the Internet to play broadcast radio programs and music. For quality sound, they can connect to stereo systems. These appliances have sleek desktop design, suitable for placing in the living room.



### • Supported Video Formats

- » WMV9
- » MPEG 1
- » MPEG 2
- » MPEG 4
- » Xvid with MP3 or CPM
- » AVI (MPEG-4 Layer only)

### • Audio Playlist Formats

- » M3U
- » PLS

### • Supported Subtitle Format

- » SRT

### • UPnP AV & WCN Support

- » IntelNetworked Media Product Requirements (NMPR) compliance, seamless integration with other UPnP AV media devices.
- » WindowsConnect Now (WCN) simplifies configuration of all wireless appliances.

## DSM-320RD

### Media Player



- RCA/AV Audio Output
- RCA/AV Video Output
- S-video Output
- Component Video (or SCART Interface for Europe)
- Optical Digital Audio Output with 5.1 Channel Audio Support
- Coax Digital Audio Output
- 802.11g Wireless Interface
- 10/100BASE-TX Ethernet Interface
- Built-in DVD Player Supporting DVD, VCD, SVCD, CD, MP3 Formats
- Built-in Card Reader Supporting SD, Compact Flash (Type I/II) and MMC Formats

## DSM-510

### HD Media Player



- HDMI Interface
- Component Video (or SCART for Europe)
- Composite Audio and Video Output
- Optical Digital Audio Output
- Supports WMV9 Video Format
- DIVX<sup>®</sup> Certified
- 802.11g Wireless Interface
- 10/100BASE-TX Ethernet Interface

## DSM-120

### Audio Adapter



- 2 USB Ports to Connect to Flash Drive & PC
- Compartment for 2.5-Inch IDE Hard Drive
- Plays MP3 Music from Flash Drive, PC or Attached Hard Drive
- Plays Internet Music & Radio Programs
- 802.11g Wireless Interface
- 10/100BASE-TX Ethernet Interface
- Optical Digital Audio Output
- Composite Audio Output

## DSM-750

### Media Center Extender



- Dual User Modes: Extender for Windows Media Center and D-Link MediaLounge
- D-Link MediaLounge Mode Enables Direct Access of Music, Photos, Video from PCs, Network Attached Storage or USB Flash Drives
- HDMI, Component Video, S-Video, Composite Audio/Video
- Optical Digital Audio, Coax Digital Audio
- Dual Band 802.11a/g/Draft n Wireless Interface
- 10/100BASE-TX Ethernet Interface
- Windows Connect Now via USB Flash Drive

## DSM-520

### HD Media Player



- HDMI Interface
- Component Video (or SCART for Europe)
- Composite Audio and Video Output
- S-Video Output
- Coax Digital Audio Output
- Optical Digital Audio Output
- Supports WMV9 Video Format
- 802.11g Wireless Interface
- 10/100BASE-TX Ethernet Interface

## DPG-1200

### PC-on-TV Media Player



- Watch Movies, View Photos on TV screen, Listen to Music Playing on Computer
- VGA Video, Component Video
- Composite Audio/Video
- 802.11g Wireless Interface
- 10/100BASE-TX Ethernet Interface



## Features & Benefits

- **Internet PC Camera**
  - » Useful for video chats, video e-mail, personal surveillance, personal album and remote tutorial over Internet.
  - » Can record digital video directly to a PC's hard drive and edit photos.
- **Fully Contained Units**
  - » Include all necessary hardware to capture video for transmission over the Internet.
- **Connect to PC's USB Port**
  - » No need to plug in power adapter.

The PC cameras are fully contained units with all the necessary hardware to capture video for transmission over the Internet. These cameras connect to the PC's USB interface and draw power directly from the PC's USB bus. Ideal for use with laptop and portable computers, this camera can be used for video chats, video e-mail, personal surveillance, personal album and remote tutorial. Software is provided to record digital video directly to a PC's hard drive and edit photos.

**VisualStream™**  
**Digital Multimedia**

### DSB-C120

*100K Pixel PC Camera*



- 352 x 288 Resolution
- Color CMOS Sensor
- 24-Bit RGB Colors
- USB Connection to Computer
- Clip Provided for Mounting on Laptop Computer or Monitor Screen

### DSB-C320

*330K Pixel PC Camera*



- 640 x 480 Resolution
- Color CMOS Sensor
- 64 Million Colors
- Up to 30fps @ QVGA
- Built-in Microphone
- USB Connection to Computer
- Clip Provided for Mounting on Laptop Computer or Monitor Screen

# MULTIMEDIA | USB ADAPTERS & HUBS

The USB adapters and USB hubs provide plug-and-play connection for multimedia devices and peripherals. The USB hubs allow up to 127 USB devices to be daisy chained. They offer increased functionality with additional bandwidth, allowing more peripherals to be added to computers. They also support over-current detection for connected devices.

For older computers not equipped with USB ports, users can insert upgrade adapters to add USB ports to the computer system.



## DUB-A2

### 2-Port USB 2.0 PCI Adapter



- 2 USB 2.0 Downstream (Type A) Ports
- USB-IF Certified
- Supports Windows

## DUB-C2

### 2-Port USB 2.0 CardBus Adapter



- 2 USB 2.0 Downstream (Type A) Ports
- Supports Windows, Mac OS

## DUB-H4

### 4-Port USB 2.0 Hub



- 4 USB 2.0 Type A Downstream Ports
- 1 USB 2.0 Type B Upstream Port
- USB-IF Certified
- Supports Windows, Mac OS
- 1.8 m USB Cable Provided
- Powered Through External AC Power Adapter

## DU-520

### 5-Port USB 2.0 PCI Adapter



- 5 USB 2.0 Downstream (Type A) Ports
- USB-IF Certified
- Supports Windows, Mac OS

## DUB-104

### 4-Port USB 2.0 Hub



- 4 USB 2.0 Type A Downstream Ports
- 1 USB 2.0 Type A Upstream Dongle
- Built-in Compartment to Hold Fold-up Dongle
- USB-IF Certified
- Supports Windows, Mac OS
- Slim Pocket-Sized, Lightweight, Easy to Carry
- USB Bus Powered
- Optional External Power Adapter

## DUB-H7

### 7-Port USB 2.0 Hub



- 7 USB 2.0 Type A Downstream Ports
- 1 USB 2.0 Type B Upstream Port
- USB-IF Certified
- Supports Windows, Mac OS
- 1.8 m USB Cable Provided
- Powered Through External AC Power Adapter

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